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JANUARY 2002 No. 65

the

GAMES ISSUE

**What's New
How to Win
What to Buy**

*Your future in the brave new world
of Mac games begins on page 20.*

REVIEWED:

LightWave 3D 7.0, Epson Stylus C80, Handspring Visor Pro,
DiskWarrior 2.1, QueFire CD-RW, StuffIt Deluxe 6.5, and more...

Editors' Choice: The 33 Best Mac Games

TOP GAMES



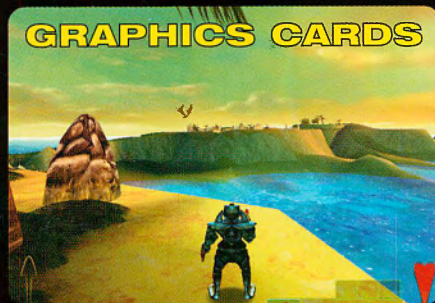
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highlights

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Welcome to *MacAddict's* ultimate guide to Mac gaming. If it's about games, it's in here—from our picks of the top 33 titles to advice on picking the right controller. Whether you're a hard-core gamer or just getting started, we'll help you get the most gaming goodness from your Mac.

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Why, indeed? Well, how about improved graphics, better games, and Mac OS X? And, of course, they're fun.

by Narasu Rebbapragada

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Oh, what a beautiful morning!



Does this plasma gun make me look fat?



Controller? I don't even know her!



how to

64 Hack Your Games (and Other Apps)

Whether you're a hard-core gamer or curious about code, or you simply want to customize a game, we provide some cool tweaks that will let you stamp your own personality on any game with hackable resource files. Turn your own likeness into a game character, swap out any music soundtrack with your own CD collection, change the text blurbs in balloons, replace spoken dialogue with your own words, and more.

by Jason Whong and Kevin Savetz



Shut up and deal, monkeyboy.

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Volume 7, Issue 1

MacAddict (ISSN 1088-548X) is published monthly by Imagine Media, Inc., 150 North Hill Dr., Brisbane, CA 94005, USA. Periodical-class postage paid at Brisbane, CA, and at additional mailing offices. Newsstand distribution is handled by Curtis Circulation Co. Basic subscription rates: one year (12 issues + 12 CD-ROMs) U.S. \$39.90, Canada \$43.95, U.S. prepaid funds only. Canadian price includes postage and GST 128220688. IPM 0962392. Outside the U.S. and Canada, price is \$53.95, U.S. prepaid funds only. POSTMASTER: Send address changes to *MacAddict*, P.O. Box 5126, Harlan, IA 51593-0626. Imagine Media, Inc. also publishes *Maximum PC*, *PC Gamer*, *Next Generation*, and *PSM*. Entire contents copyright 2001, Imagine Media, Inc. All rights reserved. Reproduction in whole or in part is prohibited. Imagine Media, Inc. is not affiliated with the companies or products covered in *MacAddict*. Ride-Along enclosed in the following editions: A3, B1, B2, B3 PRODUCED IN THE UNITED STATES OF AMERICA.



This month's cover was created by the illustrious W. B. Jones.

every month

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Readers duel over the Dual-processor Power Mac and celebrate ethnicity.

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As The Jackson 5 would say if they were singing about liquid crystal displays, "LCDs! It's as easy as one-two-three! As simple as do-re-mi!" Let us show you what it's all about.

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62 Powerplay

Guess what games we're currently playing? Wrong. Actually, we had the privilege of taking a few upcoming games (in their beta state) out for a test drive. Don't be jealous (OK, maybe just a little), because we'll play nice and share our first looks at GraphSim's Red Faction, Aspyr's Otto Matic, and MacSoft's Vampire: The Masquerade—Redemption, coming soon to store shelves near you. We also bugged a few game developers to find out their plans for 2002.

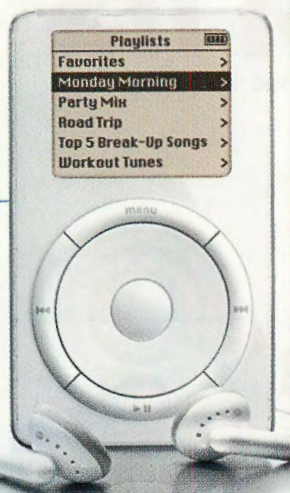
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You need to read a Word document but you're too cheap to buy the application? Can't open your Mac's CD tray from that non-Apple keyboard? Want to turn your ancient cassette collection into shiny new CDs? Starved for Mac OS X apps? You ask, we answer—"nuff said.

96 Shut Down

You can read all about which games were the picks of the litter in our cover feature, but what about the runts? Here are our picks for the top three bow-wows of the century.

Did somebody say iPodAddict?



Alright, who over-chlorinated the pool?



Your fly is down, Steve.

MacAddict

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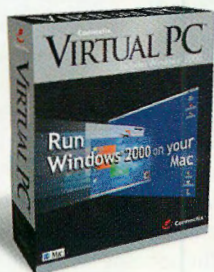
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editor's note

Not playing games? You should be.

If, when you saw the cover of this month's issue, your first thought was, "Games? Great!" then you can skip this page and jump right into our exploration of the rapidly expanding universe of Mac gaming. If, however, you thought, "Games? Bummer. There's nothing in this issue for me," read on.

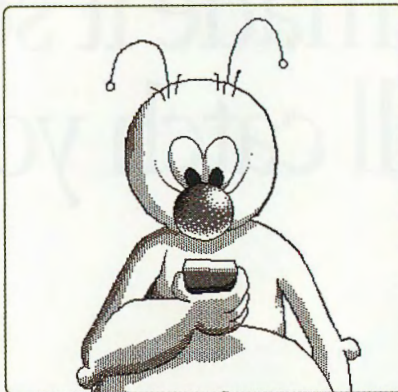
If you're not playing games on your Mac, you're not taking advantage of all your Mac can do to improve your life. "Improve my life?" you're now thinking, "How can blasting bad guys with fantasy weaponry be considered life-improving?" Two answers: First, when you think "game," don't just think "bang!" There's a lot more to gaming than testosterone-fueled shoot-'em-ups. Second, fun is good.

Let's tackle that second point first: Many of us were raised to believe that mindless fun is, well, mindless. Have you ever felt a twinge of embarrassment when a friend or partner caught you playing a game on your Mac? If so, you know what I mean. There you are, using a high-powered computer to do something other than high-powered work. Can't be right.

But it is. There's more to life than Excel, Photoshop, Word, and Dreamweaver. There are flights of fancy, adrenaline rushes, mind-bending puzzle solving, and pure escapism. There's creating a fantasy civilization and setting history in motion. There's getting a group of friends together and laughing your butts off at You Don't Know Jack's wiseacre emcee. Your Mac is an inventive, insanely clever buddy who wants to play with you; let it. Calvinism is so passé—if it feels good, boot it.

And there are so many different ways to play. As I mentioned above, today's games include much more than mere bang-bang-you're-dead splatterfests. Plus, the pace of Mac game development is more feverish today than at any other time since the first crude but charming HyperCard-based games first appeared back in the 1980s.

If you're new to Mac gaming, you might start with a straightforward title, such as Ambrosia Software's perennial favorite, Maelstrom. It takes, oh, about 30 seconds to learn how to maneuver your cute lil' rocket ship and defend it from aggressive space junk, and it's a great introduction to how nonproductivity can make you smile.



While playing with his brand-new iPod, Rik mysteriously morphed into his favorite retired game character, Cosmic Osmo.

If even arcade-style games such as Maelstrom cause anxiety attacks, try playing God—or at least a dictator or an avaricious capitalist piggy. Create a family of Sims, rule a Caribbean island in Tropico, or command a corporate empire in Railroad Tycoon II. Each allows you to play at your own pace, but provides enough challenges to keep your synapses firing.

If simulation games are still too much of a leap from your real-life board-game experiences, how about a nice game of chess? Chessmaster 6000 can either boost your ego by playing dumb, or crush it like an overripe fig when you dial it up to levels that'd make Boris Spassky feel like Boris Badenov.

Football fan? Madden NFL 2000. Golfer? Links LS 2000. Pilot? The Fly series. Gambler? Hoyle Casino. Puzzle master? Myst. Skateboarder? Tony Hawk's Pro Skater 2. Dungeons and Dragons addict? Baldur's Gate II—but if you're a D and D junkie, you already knew that.

Or maybe you simply want to jump headfirst into virtual mayhem. If so, you've got plenty of choices, like Unreal Tournament, Quake III: Arena, or Rogue Spear. Go ahead, blast away.

One final note: There's been plenty of dime-store sociology that berates violent computer games. I won't try to refute those critics, but I believe today's game players know the difference between onscreen fantasy and flesh-and-blood reality—and if they don't, no amount of censorship can teach them the difference. I can only speak from personal experience: My teenage daughter enjoys a hearty fragging session as much as the next kid, but in real life her shooting is limited to fall-away three-pointers at the buzzer.—Rik Myslewski

Staff Rants



Niko Koucourvanis

Director of Mirth and Libation

Q. If a Mac game were created about your life, what would it be like?

A. It'd be a lot like Beer Hunter, where you violently shake one can of a sixer, then open each can in

succession until you get wet.

Q. What superpowers would your character have?

A. Imaginary friends to play with, unquenchable thirst, impeccable judgment. Just the real-life stuff.



Narasu Rebbapragada

Bearer of Glad Tidings

Q. If a Mac game were created about your life, what would it be like?

A. "Where in the World Is Narasu

Rebbapragada?" would be a sim-adventure game, where you manage my basic needs (money, health, and a constant desire to eat) while I travel the world to battle evildoers.

Q. What superpowers would your character have?

A. I would have psychic powers to anticipate villains' next moves and superb kickboxing skills to whup their asses.



Chris Imlay

Wizard of Artz

Q. If a Mac game were created about your life, what would it be like?

A. It would be a fairly boring first-

person puzzle game, the only fun being found in laughing at (rather than with) me as I attempt to work too much, play terrible music, and fail to impress the opposite sex. Think young Homer Simpson.

Q. What superpowers would your character have?

A. In my impotent arsenal would be items such as "The Terrible Chord," "The Woody Allen Effect," and "Eyes of Ludicrous and Unsubstantiated Optimism."

Adapt

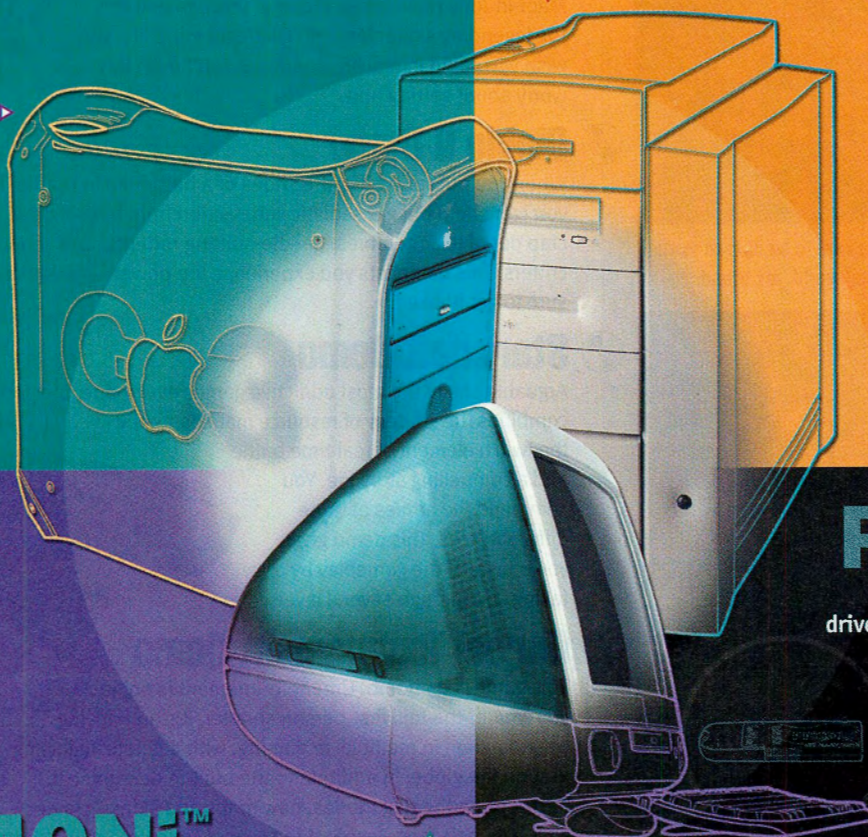
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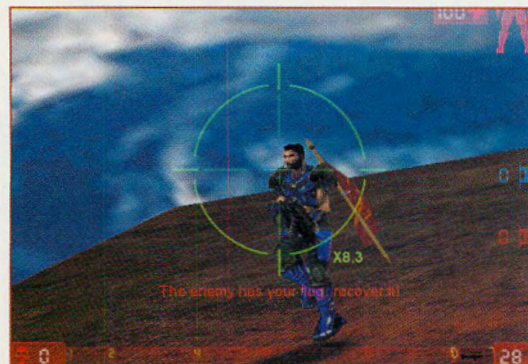
Tony Hawk's Pro Skater 2: It's rare to be able to skate without an audience! Only in a virtual world, my friend.



Diablo II: Is that all ya got? I'll take on all of you!



Starcraft: Where's the darned drop-ship? Heeeelp!



Unreal Tournament: You're dead meat, pansy boy in blue!



Tony Hawk's Pro Skater 2 Demo

Wanna be a skater? Or maybe just play one on your Mac? In Tony Hawk's Pro Skater 2, you can embody the legendary skater himself! Ollie and grind like you wish you could in real life—and you don't even have to worry about getting hurt.



Diablo II Demo

When you put yourself in the shoes of a barbarian in Diablo II, you can't help but get sadistic satisfaction from bashing the crap out of toxic zombies, needle-spitting rodents, and voodoo critters. This demo lets you experience the power, and you're sure to get hooked.



Starcraft Demo

Arguably one of the most addictive games ever made, Starcraft combines the strategy of resource management with the twitch element of real-time battle and a compelling storyline. You command the armies of three different races. This demo gives you a taste of the gameplay by taking you through several levels.



Unreal Tournament Demo

This game is da bomb. Unreal Tournament is not just your run-of-the-mill first-person shooter. It's an undying phenomenon in multiplayer gaming, with a fanatic following around the globe. In addition to the built-in deathmatch and capture-the-flag modes, new maps and skins—created by the game's fans—expand the Unreal Tournament world into a limitless universe.



Exclusives!

Kickin' off 2002 with January Nitrozac comics and "Best of Mac Show Live," volume 7.



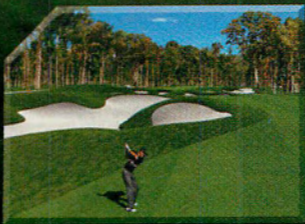
Get a sneak preview of the most special-effects-packed, high-concept staff video ever! We couldn't fit it on this month's CD because we wanted to include as many games as we could, but next month, look for the video, behind-the-scenes footage, and even video how-tos.

If you don't receive The Disc with your copy of MacAddict, you might want to consider upgrading! Each monthly Disc has cool demos, useful shareware and freeware, and the inimitable MacAddict staff video. To get 12 issues of MacAddict that include this value-packed Disc with your subscription (prorated if necessary) for just \$10 more, call 888-771-6222—the operator will take care of everything.

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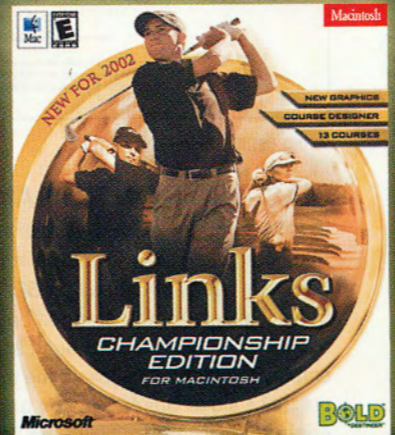
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Letters

From the mouths of babes.

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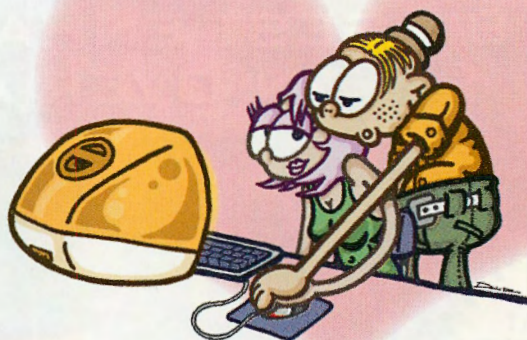


ILLUSTRATION BY DAVID ROSS

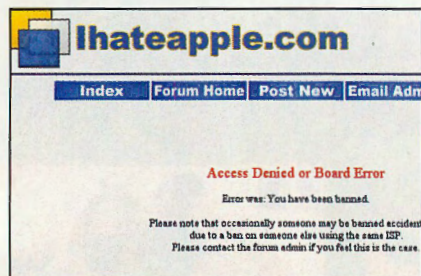
No need to ask, he's a smooth operator...

MOVE OVER, CHUCK WOOLERY

Recently I discovered Photoshop 6 Actions. I showed one to a girl, and now we are going out on a date. She thought it took hours to make a certain Action, but it only took a couple of minutes.—Justin Conn-Powers

A SITE WE LOVE TO HATE

Ihateapple.com banned me for hitting too close to home. I put a link to the Windows RG preview page (a movie spoof of Windows) on I hateapple.com's main forum and suffered two personal attacks for it. I was banned after defending the Mac and myself. Thanks for putting I hateapple's URL in the mag ("The Best and Worst of Everything Mac," Sep/01, p22). Mac addicts have since swamped the site.—D. Smith



Being denied never felt so good.

MAC HOME ON THE RANGE

In 1983, I bought a Lisa. I was so impressed that I bought a 128K Macintosh in 1984. A few years later, I bought a Mac SE. When Steve Jobs left Apple, I stopped buying Macintosh computers, although in 1993 my employer reluctantly allowed me to purchase a 650 Quadra. I came back to Apple when it came out with the iMac. I recently purchased a G4/733 for my office, and a G4/533 and G4 Cube for my home. The two Macs at home are actually in a video studio in my airplane hanger on my farm in Central Texas. There are many folks in the market like me—age 49, not too savvy about computers, but devoted to their Macs.—Sterling Brooks

DUEL OVER DUAL

MacAddict apparently tested the Dual G4/800 only on Mac OS 9.2.1 and not at all on Mac OS X (Reviews, Nov/01, p46). I can tell you that dual processor is the way to go with Mac OS X—granted, my Dual 800 is maxed out with RAM. For *MacAddict* to test a cutting-edge machine using what is essentially yesterday's OS does a disservice to its readers.—Ralph Fontcuberta
This was a tough review to do, but we stand by our overall message. The Dual G4/800 is a solid machine that needs Carbonized apps and a well-tuned OS (like 10.1) before it will show its true potential. We were careful to include tests for Photoshop (still a Classic app), specifically optimized to use the second processor, and we didn't see that much improvement. One culprit is that Photoshop needs a boatload of RAM to work effectively, and we only review stock off-the-shelf systems. We look forward to running the same Photoshop tests using the Carbonized app on OS 10.1.—Ed.

SIZE MATTERS

I was sitting down to read your article "MiniDV Goes Prime Time" (Get Info, Nov/01, p14) and to my surprise, in the "DV Demystified" section, your writer made a horrific mistake. There are in fact two types of DVCam media: Mini and Full Sized. Full Sized is what we in the industry actually call DVCam. We hardly ever use Mini DVCam. While Mini DVCam will work in your standard miniDV camcorder, Full Sized DVCam will not. Unless your readers are in the market for a \$30,000 camera, they won't want DVCam. Other than that, I liked the article—keep on cranking them out.—W. Gaughen

POLISH SENSITIVITIES

I am outraged that you decided to include an ethnic slur in the caption of your picture in *Editor's Note* (Nov/01, p8). I do not support Rik Myslewski's use of the words

"100 percent Polack" to describe himself. My grandparents came to this country for a better life and for freedom, not to be ridiculed or treated with insensitivity. I am very proud of their accomplishments and with the accomplishments of my family and the Polish people in America. Your use of the word Polack is not only insensitive, it is downright un-American.—Ed Wojciechowski
Our editor in chief, Ryszard Eugenysz Zukowska-Myslewski, tells us that when his dad, Edzu Casimir, and mother, Julianna Joanna, were growing up in a Pennsylvania coal-mining town, they were always amused when people tried to denigrate them by calling them "Polacks" because "Polak" is simply the Polish word for Pole. Dumb Anglos.—Ed.

AN UNABASHED PC BASHER

On the November 2001 Disc, the staff video about ways to destroy a PC was, without a doubt, the most boring yet. Where was the creativity? What about explosives? Fire? Dropping the PC in a swimming pool while it booted up? What about deploying vehicles (recreational or otherwise)? Even stealing an idea from *Northern Exposure* and tossing the machine with a catapult would have been an improvement. Come on, guys—when you get a good concept, develop it! —Tim Donohoe

Ah, yes, more PC-euthanasia creativity would've been nice, but there's nothing like straightforward clobberin' to get the adrenaline flowing.—Ed.

ONE VOTE FOR LAUGHTER

I just want to voice my opinion that I'd like *MacAddict* to be more fun and less serious. I laughed harder than I ever had at the PCI card troubleshooting spoof two months ago (*Shut Down*, Sep/01, p96). All the "serious folks" out there can read dry old *Macworld* to get their reprinted press releases and reviews. *MacAddict* is all about laughing over our love for Macs.—Chris Paveglio

WHERE PCS ARE RARE AND MACS WELL DONE

In November 2001's staff video on destroying PCs, you really needed to pour lighter fluid on the PCs and then have yourselves a BBQ!

—Ben Snyder

LIVE, NUDE MACS

I'm a 15-year-old Mac addict who collects pamphlets of Mac products. I hang them on the walls of my bedroom. Since my family jokes that I should have nude women on my walls (they even offered to get me a Playboy), I thought you should start putting centerfold pictures of Macs in every issue to satisfy the Mac addicts around the world with larger-than-life pictures of "nude" Macs to hang on our walls.—Kevin Henry

We're sure our attorney would prohibit our printing nude hardware of any kind.—Ed.

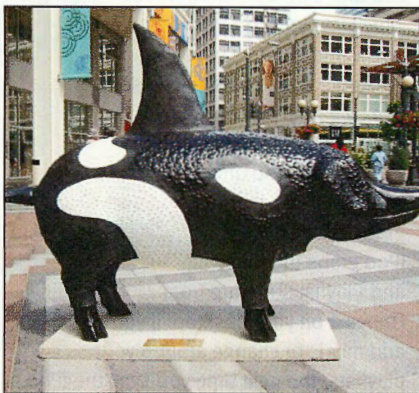
BAD TIMING

I'm hoping the November issue went to print before the September 11 tragedy at the World Trade Center. While reading "Alternate Covers, Uncovered," (Shut Down, p96) I saw a striking similarity between your "Be Free!" cover and a picture in last week's Newsweek of people jumping from the towers. But I know you

wouldn't take a joke too far.—Tom Bober
We regret publication of the image in light of recent events. As is the case with most print magazines, we print issues well in advance of the dates you receive them. We didn't know the image would have such significance at the time we printed it.—Ed.

SWINE SEPARATED AT BIRTH

In your review of the PowerShot S110 (Reviews, Sep/01, p57), is that a picture of the "killer pig" in Cincinnati?—MarkMan
No. It's part of a pig exhibition in the state of Washington.—Ed.



PHOTOGRAPH BY THEANO NIKITAS

Pork, the other killer whale.

HONOR THY NEIGHBOR'S MAIL

Your fine magazine has always made it to my mailbox—until this month. Much to my surprise, I received a call from another MacAddict subscriber in my town. He said my issue stuck to his issue and would he like me to have him deliver it to my house. What camaraderie! What a guy! What a magazine! This just shows how close the MacAddict community is and how we take care of each other. Special thanks to that masked man from Manheim, Pennsylvania, who was so thoughtful, and special thanks to MacAddict for keeping a close-knit Mac community stuck (literally) together! If you ever see a car with a Pennsylvania license plate that reads "Buy a Mac," honk. That's me!—Dave Solon

MULTIANGLE DREAMS

I want to give a huge thanks to Jason Whong for his informative article, "How to Edit a Multiple-Angle Scene in iMovie" (Nov/01, p70). Though I do not own any of the equipment required for making my own movies at this time, I plan to create a blockbuster with my friends as soon as we get some money to purchase the hardware. I have been busy thinking about how to set up multiple-angle scenes, and this article was a welcome surprise.—Nevada Dave

Let Freedom Ring!

Come see us at
Macworld Expo SF
Booth #2107

Go Wireless with Macsense Aero Products

Free yourself from the tangle and expense of wires with the XRouter Aero and AeroCard. Share your Internet your way, without wires. Now all PowerBooks can go wireless!

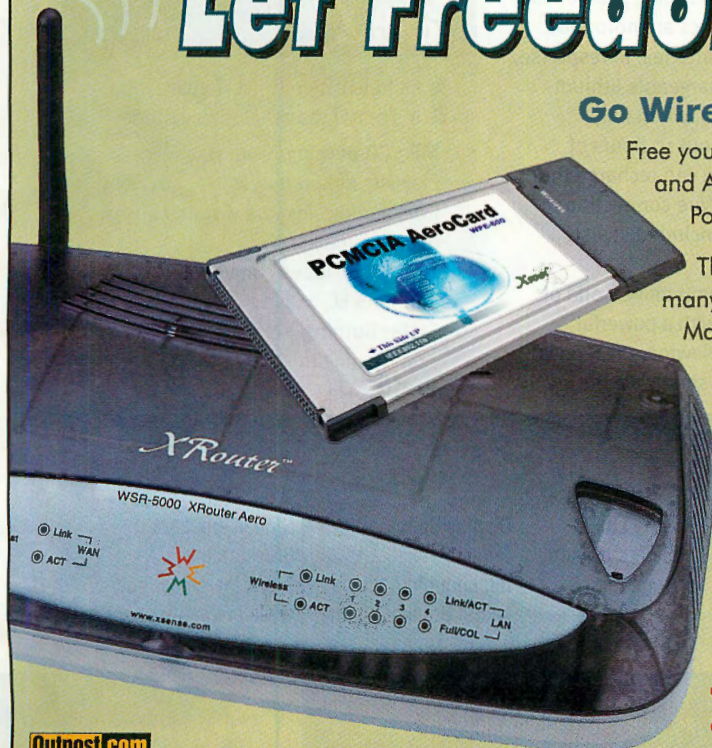
The **XRouter Aero** is an AirPort-compatible Base Station that offers many more features. A 4-port 10/100Mbps switch connects any "wired" Macs PCs to the wireless network. Web-based configuration provides quick and easy setup. The built-in firewall protects your data from outside intruders but allows you to host servers and play Internet games without security worries!

AeroCard is a wireless PCMCIA card designed for older PowerBooks* that are not AirPort equipped. With the AeroCard, every PowerBook user can enjoy the benefits of the wireless revolution. Let Freedom Ring!

* AeroCard is compatible with PowerBooks 2400, 3400, and G3s with a PCMCIA slot.

Sign up to win a
free RF wireless
AeroMouse
(a \$69 value)!

<http://www.xsense.com/free/>



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get info

The who, what, and where of the Mac world.

Pod People

The iPod Is Apple's First Genuine Gadget Since the Newton

The iPod is supermodel chic. This beautiful FireWire-ready portable music player holds 5GB of tunes and fits in your pocket. Its simple user interface lets you access any song in seconds, and it doubles as a portable FireWire drive.

That said, the iPod is expensive. At \$399, it costs \$100 more than Creative's 6GB Nomad Jukebox and \$150 more than Archos Technology's 6GB Jukebox 6000 MP3 Player and Hard Drive—both of which are USB devices.

Nevertheless, the wow factor of Apple's first consumer gadget since the Newton will make those who don't own an iPod Grinch-green with envy.

The iPod is stylish. Its cool white front matches the iBook's (see "Understanding the iPod," below, for specs). The stainless-steel back, engraved with the word "iPod," looks like it comes straight from Tiffany's. The FireWire port, headphone jack, and hold button fit compactly on top.

The iPod stores 5GB of music—about 1,000 MP3s encoded at 160 Kbps. The FireWire connection lets you download all these tunes from your Mac in a matter of minutes. The iPod also doubles as a portable FireWire drive that can store both data files and music.

We've often complained that carrying around 1,000 MP3s is cool in theory, but locating the music through the device display is difficult in practice. Apple has

cleverly addressed the navigation bugaboo with a crisp 2-inch backlit LCD and a unique scroll wheel, which lets you sort music by playlist, artist, and song.

Apple engineered this ease of use by garnering control over the hardware and software. iPod works with—and only with—iTunes 2 (see "Take 2," below.). iPod grabs the tunes and Playlist structure from iTunes 2 on your desktop. If you add music or change around your playlists, the next time you sync the iPod to your Mac, the device will update its files as well. One annoyance: iTunes can only sync with one iTunes 2 library. If you want to download someone else's music, you'll have to erase what's already on your iPod. (That's Apple's way of keeping you honest.)

Consumer electronics are notorious for burning through batteries. In response, Apple encloses a rechargeable lithium-polymer battery, which, when fully charged, gives you about 10 hours of continuous music. You can recharge the iPod through the FireWire connection to your Mac or with the included stylish power adapter.

Apple enters the competitive world of consumer electronics with a powerful contender. Unlike the Newton, the iPod is not a new concept. It's simply a more



This hot little MP3 jukebox will turn you into a pod person.

advanced iteration of a gadget the public already craves. Instead of being ahead of its time, these days Apple's ahead of the curve. And that's the perfect place to be.—NR

Take 2

It's free. It's new. It's iTunes 2, and it's better than the original iTunes.

MP3 CD Burning Burn your MP3 Playlists right onto CD.

Crossfading Avoid awkward pauses between tracks.

Equalizer iTunes comes with a ten-band EQ with 22 presets.

Faster Burning Apple says iTunes 2 cuts burning time in half.

Understanding the iPod

Product Specs You Can Make Sense Of

Description	Size (in inches)	Weight	Storage Capacity	Battery Life	Display Specs	Hidden Treasure
Dimension	4.02 by 2.43 by 0.78	6.5 ounces	5GB hard disk space	10 hours playtime	2-inch backlit LCD	Breakout game
Real-World Spec	About the size of a deck of cards	About the weight of a large banana	About 1,000 160-Kbps MP3 songs	Enough for a 60-mile jog	Big enough to play a secret Breakout game	Press the center button while in the About screen

Mac Gaming Trivia

So you think you're the Alex Trebek of the Mac gaming world? We bet you didn't know these juicy tidbits. We asked some Mac gaming veterans to reveal a few little-known facts about your favorite Mac games. Here's what they told us.

A Bug's Life

At Macworld Expo New York 2000, former Ambrosia representative Jason Whong fulfilled his promise to eat one insect for every bug in the software his company shipped that year.



Now, that's dedication to your job.

The Spectacular Mac Gaming Contest

Become Your Favorite Game Character and Win up to 30 Mac Games

In the spirit of our Mac Gaming Spectacular, *MacAddict* has teamed up with the industry's elite to bring you more than 50 games and peripherals—all yours for the winning.

How to Win

All you have to do is dress up as your favorite Mac gaming character and take a picture of yourself. The more creative you are, the better. We certainly won't penalize you for digital enhancement, but the judges frown upon simply pasting your head on a screenshot body. That's not very creative.

Send us your picture by snail mail or email along with the information requested on the entry form below. Our esteemed panel of judges will pick the winner and a few runners-up to win fabulous Mac gaming prizes.

Deadline for Entry: We must receive all entries by February 1, 2002. We will announce the winners in the May 2002 issue of *MacAddict*. Only one entry per contestant.

THE PRIZES

GOLD: 30 amazing Mac games

SILVER: 15 amazing Mac games

BRONZE: 5 amazing Mac games

TIN: 1 amazing Mac game

Plus, all winners will receive a Saitek Cyborg 3D USB Gold joystick and P750 Digital Gamepad.

Win great games like these:

Age of Empires II, Tony Hawk's Pro Skater 2, American McGee's Alice, Tomb Raider Chronicles, Escape from Monkey Island, Tropic, Centipede, Driver, Rogue Spear, Deus Ex, Star Trek Voyager, Baldur's Gate 2, Aliens versus Predator, Giants Citizen Kabuto, Sacrifice, F/A-18 Hornet, Summoner, WingNuts, and much more!

The Spectacular Mac Gaming Contest Entry Form

Full Name, Age:

Address 1:

Address 2:

City, State, Zip:

Game Character You're Impersonating:

Game Your Character Appears In:

Personal Statement:

Snail-Mail Contest Entries

Send a high-resolution photo (at least 4 by 6 inches) to:

Games Contest

MacAddict magazine

150 North Hill Dr., Brisbane, CA 94005

Email Contest Entries

Send a compressed high-resolution

(300-dpi) image to:

contest@macaddict.com

Subject Line: Game Contest

No phone calls. Deadline for entry: February 1, 2002.

Contest Rules

The *MacAddict* editors will judge all entries and choose the winner based on the following criteria: concept originality, costume creativity, and quality of execution. One entry per individual. All entries must be received no later than February 1, 2002, with the winner announced on or around May 2002. Each of the judging criteria (originality, creativity, and execution) will be weighed equally. By entering this contest you agree that Imagine Media may use your name, likeness, and Web site for promotional purposes without further payment. All prizes will be awarded and no minimum number of entries is required. Prizes won by minors will be awarded to their parents or legal guardians. Imagine Media is not responsible for damages or expenses the winners might incur as a result of the contest or the receipt of a prize, and winners are responsible for income taxes based on the value of the prize received. A list of winners may also be obtained by sending a stamped, self-addressed envelope to Imagine Media, Inc., c/o *MacAddict* contest, 150 North Hill Dr., Brisbane, CA 94005. This contest is limited to residents of the United States. No purchase necessary; void in Arizona, Maryland, Vermont, Puerto Rico, and where prohibited by law.

The Mayor of Orion II

Peter Tamte, founder of MacSoft and Destineer, told us that when MacSoft published Master of Orion II, it accidentally misprinted tech support's phone number on the box. As it turns out, the number printed was for the mayor of Plymouth, one of the largest communities in the Twin Cities area, where MacSoft had its headquarters at the time.



Explaining why Antarans aren't colonizing Centauri is probably beyond the scope of standard mayoral duties.

newsNOOK

Did Someone Say Profit?

Apple announced in October 2001 a net profit of \$66 million, or \$.19 per diluted share, for Q4 2001. While this falls short when compared to the hefty \$170 million net profit from Q4 2000, Apple shares went up \$1.01 to \$18 (a 6 percent increase) the day after the announcement.

The iBook iRocks

In another October announcement, Apple stated that iBook sales tripled in Q4 2001 over the same period in the year 2000. The company sold 251,000 iBooks during this quarter, compared to 89,000 iBooks in Q4 2000 and 190,000 units in Q3 2001.

New Books

Other Apple news included the introduction of 550MHz and 667MHz G4 PowerBooks with 16MB of VRAM, built-in Gigabit Ethernet, and ATA/66 hard drives from 20GB to an optional 48GB. They feature a new ATI Mobility Radeon graphics processor with 4X AGP and 16MB of VRAM. The 550MHz model costs \$2,199, while the 667MHz model costs \$2,999. Apple also announced a new 600MHz iBook at \$1,699—that's \$100 less than the previous top-of-the-line model.

A Congressional Seal of Approval?

Online news source Wired News reported in October 2001 that Representative Vernon Ehlers of Michigan suggested that using a Mac can bolster computer security in these troubled times. "I own a Macintosh," said Ehlers. "And I've never had a problem with viruses. Maybe there's a lesson to be learned." Perhaps the new U.S. Office of Homeland Security should look into this.

United States Gets on the Broadband Wagon

By the year 2006, more than 40 percent of U.S. online households will connect to the Internet via some sort of broadband link, according to Jupiter Media Metrix, a technology research firm.

get info

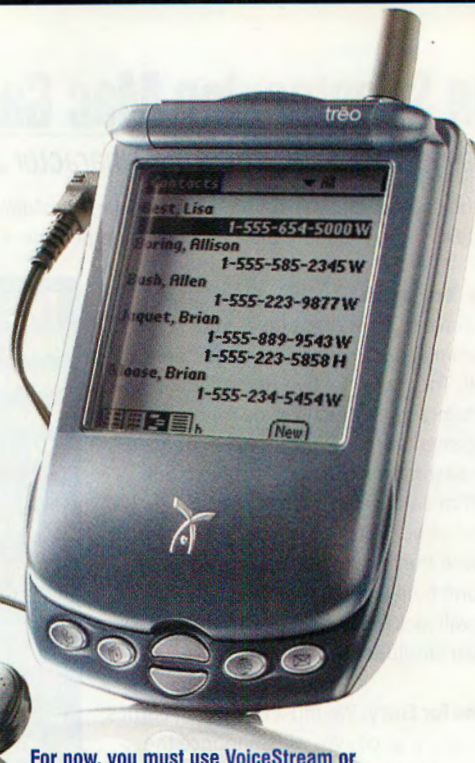
droolWORTHY

Sexy Stuff We Can't Wait to Get Our Mitts On

Treo

Handspring www.handspring.com \$399

While driving down the highway, you whip out your cell phone to make a call but realize you need your handheld organizer to find the number. Before you know it, you've got ten fingers on your gadgets and no hands on the wheel. To avoid disaster, try the Handspring Treo. This all-in-one PDA, cell phone, text-messaging, and wireless-browsing device runs the Palm OS, contains 16MB of memory, and has a flip lid that doubles as your earpiece. A keyboard is included with the Treo 180; you must use Palm's Graffiti for data input with the Treo 180g. A color version of the Treo is due out in midyear.—CL



PHOTOGRAPH COURTESY OF HANDSPRING

For now, you must use VoiceStream or Cingular wireless service providers. AT&T should support the Treo soon.



XHub 7 Plus

Adaptec www.adaptec.com \$139

The XHub 7 Plus is a really beautiful, semiexpensive, fully functional USB hub. Once the Mac drivers are available, however, this futuristic device will become your ticket to USB 2.0 with speeds that rival FireWire's. XHub 7 Plus comes with seven ports, cool snap-on cable management, and a photo frame (aw, how cute). Of course, you'll need to install a USB 2.0 PCI card to use the hub, but the future is here, and it's worthy enough for drool.—NR

If seven USB ports just aren't enough, the XHub 7 can stack on top of other XHubs.

PHOTOGRAPH COURTESY OF ADAPTEC

Shareware Pick of the Month

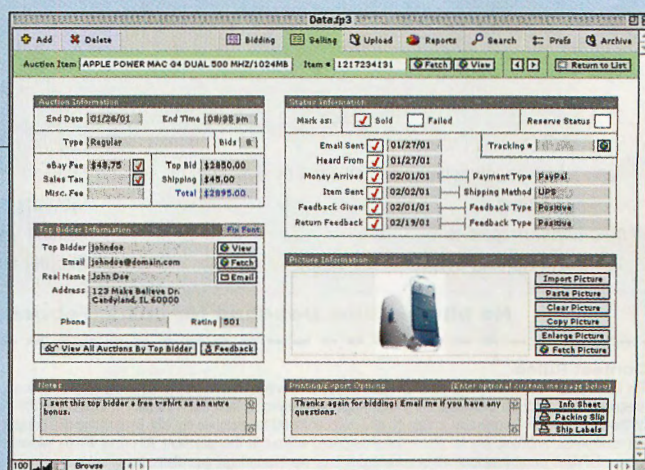
AID 4.1

PRICE: \$29.95 (download)
URL: www.epigroove.com

Selling celebrity toothbrushes over eBay isn't weird anymore, and thanks to AID (Auction Information Database) 4.1 by Epigroove, it isn't hard either.

AID helps you manage the data from your eBay auctions, including the auction description, end date and time, current or final top bidder's user name and email address, and final sale price of your item. You can send autogenerated emails to the top bidder once you close an auction, and you can upload new auctions without logging on to eBay's Web site.

The newest version of AID includes a major speed increase, better support for eBay Motor and Stores, and an improved way to get the names of top bidders. The free demo only lets you download your most recently conducted auctions. The full version works on Mac OS 8.6 and later, but it is not yet Carbonized for Mac OS X.—Whitney Hess



Forget clicking through multiple screens to find a bidder's email address. With AID, it's all right there.

Mac Gaming Trivia

Good Cop

Corey Tamas of MacGamer.com told us that Electronic Arts intended to publish the game FutureCop for PC only, but the game's developers were such ardent Mac fans that they developed a Mac version on their own time and gave Electronic Arts the rights to it. No wonder the game costs less than \$20.



We love you, man!

Tips and Tricks for Photoshop 6

From the Authors of The Photoshop 6 Wow! Book

Adobe Photoshop 6 is the most robust image-editing program out there, but gaining the skills to unleash all that power can frustrate even the most tech-savvy designers. Here are a few tips from *The Photoshop 6 Wow! Book* (\$49.99, Peachpit Press)—some are easy timesavers, others are more advanced techniques, but we've designed them all to help you get the most out of Photoshop.

—Linnea Dayton and Jack Davis

TIP 1 When editing colors on selected areas of objects, use shortcuts to fill color faster.

- To fill a selection with a chosen foreground color, press Option-Delete.
- To fill a selection with the background color, press Control-Command-Delete.
- To open the Fill dialog Box, press Shift-Delete.
- To fill a transparent layer with transparency or to fill a background layer with background color, press Delete.

TIP 2 Use Adjustment layers for risk-free image editing.

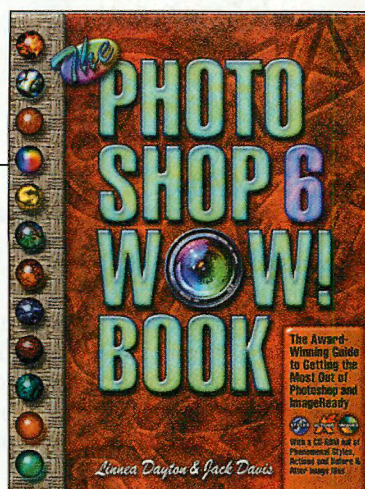
Adjustment layers let you correct the tone and color of an image without risking the integrity of your original image. Create Adjustment layers by pressing the black-and-white Create New Fill/Adjustment Layer button. To change the settings of an Adjustment layer, double-click the layer's thumbnail in the Layers palette to bring up a formatting dialog box.

TIP 3 Import decorative type using Shape Layers.

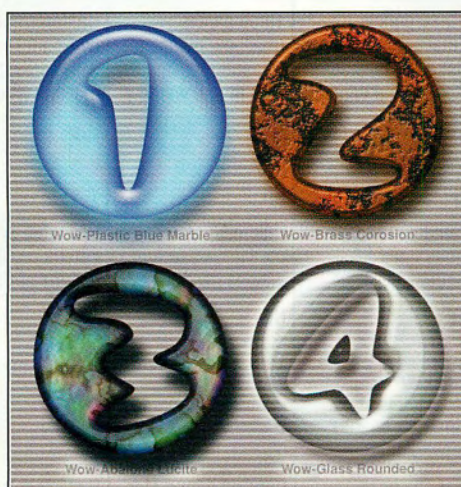
You can use Adobe Illustrator's extensive options for setting and tweaking type, and then import your type into Photoshop 6 as a Shape layer. First, in Illustrator, set and customize your type, convert the type to outlines, then copy it to your Mac's clipboard. Next, in Photoshop, choose Paste from the Edit menu and click Shape Layer from the ensuing Paste As dialog box to import the outlined type from Illustrator. As a Shape Layer, your type will retain the vector-based curves you created in Illustrator.

TIP 4 Use Scale Effects to finesse Layer Styles.

Layer Styles provide an ideal way to apply color, pattern, and dimensional effects with quality, speed, and flexibility. The easiest way to apply a preset style to a layer is to select the layer in the Layers palette, then click one of the style thumbnails in the Styles palette to apply that style to the layer. Most likely the style's default formatting will not suit the element you're designing, so you should scale the style to fit the layer. To scale a Layer Style, choose Scale Effects from the Layer Style submenu of the Layer Menu. Click the arrow in the Scale Effects dialog box and watch your image change as you adjust the scale slider.



Read this book, then wow your friends with your newfound expertise in image editing.



With options for colors, tones, gradients, and textures, Layer Styles offers almost infinite variety.

The Duke Nukem Easter Egg

According to Corey Tamas of MacGamer.com, this is one of the coolest Easter eggs out there. In the first level of MacSoft's Duke Nukem, go into the movie theater, up the stairs, and into the projector room. Push a button to open the curtains and type *dn1984*. You'll see Apple's "1984" commercial on the movie screen.

newSTUFF

Midex 3

Steinberg, www.steinberg.net, about \$110
Steinberg has released the Midex 3, a USB MIDI interface with a MIDI in and three MIDI outs. The device is available now.

USB 2.0 ION

Iogear, www.iogear.com, \$119
Iogear announced a new USB 2.0 2.5-inch portable hard drive enclosure, which is backward compatible with USB 1.1. You'll need Mac OS X to use the ION, which should be in stores by the time you read this.

WebsiteCompressor 3

Blue Line Studios, www.blueline-studios.com, \$20
Blue Line Studios has released the latest version of WebsiteCompressor, which streamlines HTML code created by WYSIWYG HTML authoring tools. New features include drag-and-drop support, as well as better handling of JavaScript and Cascading Style Sheets. WebsiteCompressor 3 is available now.

Xcaret Pro for Wall Street PowerBook G3

MCE Technologies, www.mcetech.com, \$449
Xcaret announced a DVD/CD-RW drive for the 1998 PowerBook G3 Wall Street series. This drive writes to CD-RW at 4X, reads DVDs at 6X, and reads CD-ROMs at 24X. The Xcaret Pro for Wall Street should be available by the time you read this.

MYOB AccountEdge 2.0

MYOB, www.myob.com, \$249 (\$119 upgrade)
One of the only enterprise-software companies developing for Mac, MYOB announced version two of its accounting software. AccountEdge 2.0 includes a new bank register, import support for online banking data, new forms, and new report formats. It should be available by the time you read this.

Swift 3D 2.0

Electric Rain, www.swift3d.com, \$159
Finally released as a stand-alone application (it was previously a Flash plug-in), Swift 3D lets designers model, animate, and render 3D scenes to Flash (SWF), PostScript (EPS), and vector graphic (SVG) formats. With new modeling and rendering features, Swift 3D 2.0 is available now.



We can't believe Apple OK'd this.

X-it INTERVIEWS *Developers Discuss Their Mac OS X Apps*

Steve Berkley

CEO of Bias (800-775-2427, www.bias-inc.com)

Mac OS X products: Deck 3.1 and Peak 3.0

Availability: The public beta is available, and the final release should be available by the time you read this.

When Bias announced OS X versions of Peak, a two-track digital-audio editing and processing program, and Deck, a multitrack recording and editing app, it became one of the first audio-software developers to release products for the new OS.—NR

MA: What were some of the problems when you were first developing for Mac OS X?

SB: The main development platform,

Metrowerks CodeWarrior, was still in beta. When debugging, it took 5 seconds to go from one line of code to another. We were fortunate enough to get a prerelease of Puma [the code name for Mac OS 10.1]. It's a good thing we got [Puma] because it created some problems—mostly graphical user interface drawing problems.

MA: What can Mac OS X bring to an audio app that Mac OS 9 can't?

SB: You used to have to integrate other companies' standards [such as Mark of the Unicorn's MAS, Digidesign's DAE, and Steinberg's ASIO] into your product. All that goes away with Mac OS X's Core Audio [an OS-level feature that eliminates the need for



Bias CEO Steve Berkley is optimistic that audio software and hardware companies will jump on the Mac OS X bandwagon.

third-party MIDI and audio protocols]. We also get multichannel audio for recording and playback at higher sample rates and bit depths, as well as incredible latency-timing performance.

MA: How long will we have to wait for our existing audio hardware to run on Mac OS X?

SB: Not long. Companies like Magic and Roland are working on Mac OS X drivers for their USB MIDI interfaces.

You've Got Options!

Mac OS X Email Applications

You're in Mac OS X and you want to check email, but which email application is right for you? While Apple's Mail program is bundled free with the OS, third-party email programs like Eudora offer

better filtering and customization for the same price—free. To help you out, we dissected six OS X email apps into their major components. Pick the features that are right for you.—Rob McNair-Huff

Email App	Mail	Eudora 5.1 Sponsored	Powermail 3.0 (beta)	Netscape X 6.1	Mulberry 2.1	SweetMail 2.09	Entourage X for Mac
Company and Cost	Apple, www.apple.com , free	Qualcomm, www.eudora.com , free (Sponsored mode displays ads)	CTM Development, www.ctmdev.com , \$49	Netscape, www.netscape.com , free	Cyrusoft, www.cyrusoft.com /mulberry, \$36	Ichise, www2.ttcn.ne.jp/~sweet/mail , \$28	Microsoft, www.microsoft.com/mac , bundled with \$499 Office v. X for Mac
Interface	Three panels (mailbox, message list, and message text) in one window	Old school, with multiple one- or two-panel windows	Three panels (mailbox, message list, and message text) in one window	Three panels (mailbox, message list, and message text) in one window	Customizable one- or two-panel interface with separate mailbox window	A one- or two-panel interface, with a separate mailbox list	Three panels (mailbox, message list, and message text) in one window
Multiple Accounts	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Spell Check	Yes	Yes	No	No	Yes	Yes	Yes
Filtering	One search criteria per filter, up to five actions per filter	Two search criteria per filter, up to five actions per filter	Unlimited search criteria per filter, actions per filter	Unlimited criteria per filter, up to four actions per filter	Unlimited search criteria per filter and actions per filter	Up to two criteria per filter, one action per filter	Seven search criteria per filter, unlimited actions per filter
Message Labeling	No	Yes	Yes	No	No	Yes	Yes
Search Function	High-speed search with built-in indexing	Yes	High-speed indexing using Sherlock search technology	Yes	Yes	Yes	Fast, complex category-based searches
What's Unique	The Dock displays the number of new email messages	Highly customizable search functions	Has the best filtering and is AppleScriptable	Bundled with a Mac OS X Web browser and chat client	Highly scalable for Linux, Windows, and OS X users	Offers threaded messages, grouped by topic	Contact and calendar app comes bundled with Microsoft Office

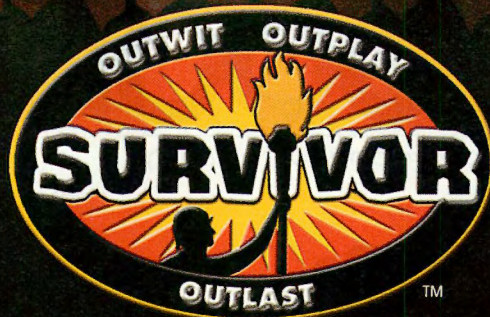
Mac Gaming Trivia

Merry Christmas

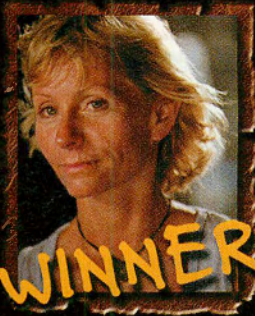
Here's another classic Easter egg from the days of old. If you play Delta Tao's 1994 game Dark Castle on Christmas day, you'll see a green Christmas tree on your way into the castle. The decor makes the holidays more festive, doesn't it?



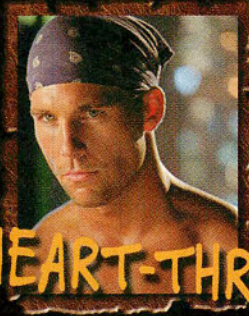
Ho ho, ho!



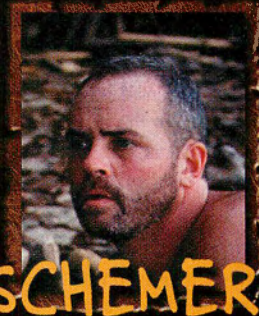
THE INTERACTIVE GAME



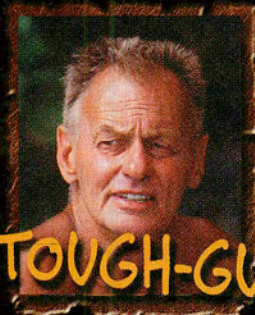
WINNER



HEART-THROB



SCHEMER



TOUGH-GUY



DRAMA QUEEN



YOU?

Do you have what it takes?

For the first time ever, the hit television show Survivor™ has come to your Mac! Play as any of the actual Pulau Tiga or Australian Outback contestants or create your own character. Throughout your adventures you'll form powerful alliances, compete in grueling challenges, immerse yourself in the drama of Tribal Council and much more.



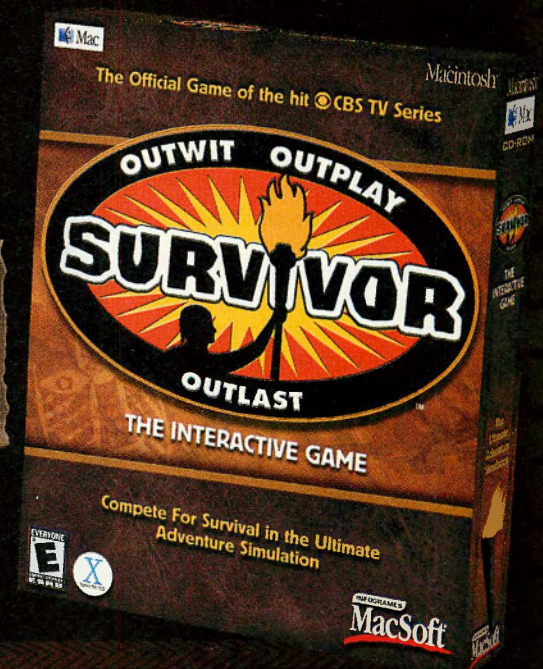
Choose your character and form alliances with fellow tribe members



Compete in twenty-four grueling Reward and Immunity Challenges



Vote off tribe members at Tribal Council



For more information visit:
www.survivorgame-info.com

scrapbook

Learn what's on the inside without voiding your warranty.

Those Luscious LCDs

by Narasu Rebbapragada

Liquid crystal displays (LCDs) are sexier, thinner, and more energy efficient than cathode-ray tube (CRT) monitors. We talked to Herb Berkwits, senior manager at ViewSonic, to learn how they work and why most (but not all) of you will want one for your desktop Mac.

1 Backlighting

The backlight consumes 95 percent of the energy required to power the LCD. This gives the display its thin form factor and makes it energy efficient.

3 Glass Plates

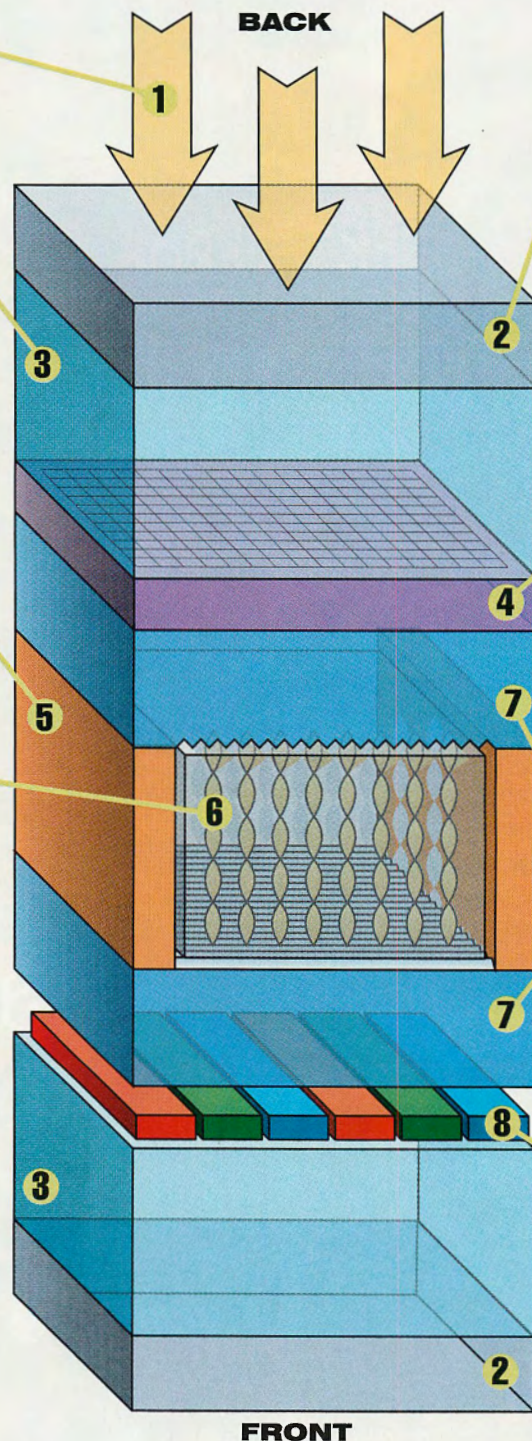
Two glass plates sandwich the liquid crystal material. The glass plate near the backlight is divided into a fixed number of pixels, giving an LCD monitor only a single native resolution, as opposed to a CRT monitor, which offers many resolutions. Each pixel is divided into three (red, green, and blue) subpixels. So a 1,024-by-768-pixel monitor has 786,432 pixels and therefore 2.36 million subpixels.

5 Spacer

The spacer physically creates a uniform distance between the two glass plates.

6 Liquid Crystals

At the heart of LCD technology is the liquid crystal material. The molecules within this material can bend light waves. These molecules rest in a twisted state, which bends light waves 90 degrees (see "Alignment Layers," right). An electric current from the thin film transistors (TFTs) hits these molecules, untwists them, and lets the light waves pass through unbent. This bending and unbending of light waves determines how many of them pass through the lines in the front polarizing filter (at bottom) to brighten the pixels of the image onscreen. When all the light waves are bent in the same direction as the lines of the polarizing filter, they all pass through and the pixels are brightest. When no light waves are bent in the same direction as the lines of the front polarizing filter, they can't pass through and the pixels are darkest. There are 256 intermediate stages between full voltage on and voltage off, resulting in various intensities of light. These variations give you grayscale and millions of shades of colors.



2 Polarizing Filter

Two polarizing filters, which filter the incoming and outgoing light waves, are attached to the outside of each glass plate (see "Glass Plates," left). They contain a series of superthin parallel lines that work similarly to Venetian blinds. This back-side filter lets through only those light waves oriented in the same direction as its lines. The front filter only lets out light waves oriented in the same direction as its lines. Light waves that make it through both filters compose the image on the LCD screen. The polarizing filters can be arranged so that the lines on each filter are oriented parallel or perpendicular to each other.

4 Thin Film Transistor (TFT) and Electrodes

A grid (rows and columns) of tiny transistors affixed to the back-side glass plate physically divides the glass panel into pixels. Each transistor controls one subpixel. A processor on the monitor talks to each transistor, which turns an electric field on and off to determine how brightly to illuminate a subpixel. The precise shape and position of each subpixel creates a sharper picture than a CRT can provide.

7 Alignment Layers

Submicroscopic grooves in the Alignment layers anchor the molecules at the ends of the liquid crystal material, causing the molecules to rest in a twisted state. Two sets of grooves (one on each plate) are positioned at 90 degrees to each other. This means the ends of the molecular chain are also positioned at 90 degrees to each other, which creates a twist in the chain.

8 Color Filter

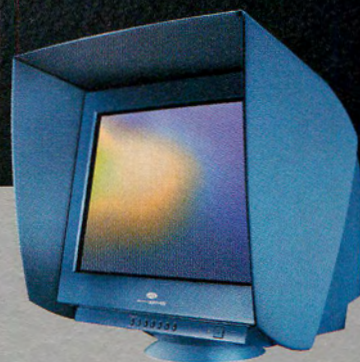
The light waves that make it out of the liquid crystal are still white. Next, they go through red, blue, and green color filters to form the color building blocks of your image. Although LCD technology is rapidly approaching parity, it has a narrower color range than CRT technology. Graphic prepress and video folks will want to stay with CRT for now.

ILLUSTRATION BY O. DALE GLASSGOW



AMAZINGLY ACCURATE COLOR.

The LaCie electronblue III monitor. Built on aperture grille technology with a naturally 100% flat screen, this monitor combines high resolution and outstanding color accuracy so what you see on the screen is what you'll see on the page.



LACIE Made for ideas.

READY, SET,

Mac gaming is more alive and exciting than ever before. So get out there and start playing!

Games. Some of the suits on Capitol Hill would have you believe that games are a waste of time and make your brain go to pot. Well, we're here to tell you they're wrong. Games are a great way to spend your time—after all, many games relieve stress, teach kids (and adults) to work through problems, and provide a good way for families to socialize. More than anything, they're just damn fun.

If you've never played a game before in your life, then you're missing out on a lot of the fun and excitement you can have on your Mac. Luckily, you're never too old to start playing games. And even more fortunately, there's never been a better time to play games.

After all, Mac OS X is here: all the better to run games that won't crash on you. Mac hardware is faster and more powerful than ever before: all the better to run more-complex, prettier games that have rigorous system requirements. And, as you'll see in our "Top Games" section (p24), Mac games have never been as good as they are now. Not only do the games of today look and play better, they also appeal to a greater number of people—there are just as many awesome titles for the hard-core gamer as there are for the newcomer.

One last word: The *MacAddict* staff comprises many different personalities. We range in age from the mid-twenties to the early fifties. Some of us can proudly proclaim that we stayed up until 4 a.m. playing *StarCraft*, while others of us *still* think *Tetris* is the best game ever made. Yet each of us had a blast putting together this feature as we played new games and rediscovered old favorites. That just goes to show that even though different people have dissimilar tastes, nobody is above having a little fun.

Inside

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Why is it a great time to be a Mac gamer? Find out here.

Top Games p24

We award gold, silver, and bronze medals to 33 Mac games in 11 different categories.

Give New Life to Old Games p30

If you've grown bored of *Unreal Tournament* or *Myth II*, find out how to spice up your old games.

Take Control of Your Games p34

In the market for a controller? Here's how to find the best gamepad, joystick, steering wheel, or mouse for your needs.

The Graphic Details on Graphics Cards p38

If you find the world of graphics cards confusing, get the lowdown on Mac video cards and clear your brain.

GAME!



Find *Apelron*
1.0.3, *Burning*
Monkey Puzzle
Lab 1.6.1,
Maelstrom
1.4.3, and
demos of
Diablo II, *Deus*
Ex, *Oni*, *Star*
Wars Racer,
StarCraft, *Tony*
Hawk's Pro
Skater 2, and
— *Unreal*
Tournament
on The Disc.

WHY PLAY GAMES?

by Narasu Rebbapragada

Who's Who

Here are the major players in the Mac games industry.

COMPANY	CLAIM TO FAME	NEW STUFF
Ambrosia Software, www.ambrosiasw.com	King of shareware that brought you Maelstrom and Escape Velocity.	Pillars of Garendall
Aspyr Media, www.aspyr.com	Publishes Mac games and ports popular PC games to the Mac. Brought Lara Croft and The Sims to the Mac.	Spider-Man, Clive Barker's Undying
Blizzard Entertainment, www.blizzard.com	Developed strategy and role-playing classics WarCraft and Diablo.	WarCraft III
Destineer Studios, www.destineerstudios.com	Brand-new company porting Microsoft games and original games.	Age of Empires II, Links Championship Edition
Freeverse Software, www.freeverse.com	Shareware stalwart created Mac card games, Jared, and Burning Monkey.	iPuppet Classic Cards (published by Aspyr Media)
GraphSim Entertainment, www.graphsim.com	Released F/A-18 Hornet, Descent 3, and Baldur's Gate.	Summoner, Red Faction
MacPlay, www.macplay.com	Classics such as Castle Wolfenstein, Dungeons and Dragons.	Baldur's Gate II, Giants: Citizen Kabuto
MacSoft, www.wizardworks.com/macsoft	Duke Nukem, the original Quake, and Unreal series. Enough said.	Civilization III, Master of Orion

"**S**hall we play a game?" The smooth-talking artificial intelligence (AI) of a Defense Department mainframe posed this challenge to Matthew Broderick, a teenage hacker who wanted to play a computer game called Global Thermonuclear War.

That was 1983, and the movie was *WarGames*. Back then, gamers were pimply-faced kids who played games like Asteroids and Lode Runner on an Atari 2600 or Apple IIe (Macs didn't exist yet). Using keypads or joysticks, they zigzagged tiny bitmapped heroes around flat-colored graphics to a cacophony of blips and bleeps.

Fast-forward to the year 2002. A supercomputer can fit into an 8-inch cube. Your grandmother can play Who Wants to Be a Millionaire on a hot-pink iMac. And you? You can use a 3D gaming glove to frag a beautifully detailed demon at 60 frames per second. If you're not already a gamer, you're missing a lot.

There has never been a better time to be a Mac gamer. Games are better than ever. Graphics are better than ever. And the Mac is better than ever. But Mac gaming wasn't always healthy. In the mid-1990s, the industry was approaching dead-fish status; there were few Mac games and even fewer Mac developers. According to Corey Tamas, editor in chief of Macgamer.com, the return of Steve Jobs in conjunction with the 1998 launch of the first iMac revived both Apple and Mac gaming. Industry leaders point to a few other factors.

Better Games

"Games in general are maturing a lot," says Peter Tamte, who founded MacSoft in 1993 and Destineer last year. (See "Who's Who," left, for more info on Mac game companies.) Game developers these days are better at making more complex and intelligent games.

For example, Tamte explains, if you can win battles using a particular weapon all the time, the game is not balanced or challenging.

There is also a greater range of high-quality games on the Mac right now—and not all of them are shooters. Games like Aspyr's *The Sims* (a simulation game in which you control people) and MacSoft's *Tropico* (a simulation game in which you rule over an island) are exciting because they transcend traditional action-adventure genres and draw in new gamers. These games don't require superfast fingers and top-notch hand-eye coordination for success—people can easily get into them and still have fun because they involve smart decision-making skills.

According to NPD Intellect market research, *The Sims* series of games, including the original game and the *House Party* and *Livin' Large* expansion packs, were the three top-selling Mac games in August 2001. *Tropico* was number four.

Better Graphics Cards

A new generation of 3D graphics cards like ATI's Radeon series and nVidia's GeForce series render beautiful graphics at incredibly fast speeds (see "The Graphic Details on Graphics Cards," p38). And graphics cards are now advanced enough to handle the burden of processing graphics, which frees up room on your Mac's CPU to process the game's AI. In other words, developers no longer need to sacrifice graphics for gameplay.

Mac OS X

A tagline on Apple's Web site says, "Mac OS X version 10.1: The OS for Games. Period." With Mac OS 10.1's automatic memory allocation (aka fewer crashes), integrated OpenGL (aka faster and more-stunning 3D graphics), and overall stability (aka happier users), games should have fewer problems running and be

The History of Mac Gaming

The Mac gaming industry went from nil to thrill during the past 20 years. Here are some memorable moments.

1984

- Sierra releases what would become the first 3D-animated adventure series, *King's Quest*.

1986

- Hungarian programmers port the puzzle game, *Tetris*, to the Apple II.



1987

- Brothers Rand and Robyn Miller found the company Cyan and create *The Manhole*, the first graphical adventure game for Mac. They would later create *Cosmic Osmo* and *Myst*.



1989

- Patrick Buckland programs *Crystal Quest*, one of the first action games for the Mac.

1989

- Maxis releases *Sim City* for the Mac, creating the city simulation genre.



1990

- Reactor releases *Spaceship Warlock*, one of the first adventure games on CD-ROM.

1993

- Peter Tamte founds MacSoft, which brings both low-cost Mac games and high-profile PC ports to the Mac.
- Cyan releases *Myst*, touted for its graphically rich environments.

more fun to play. In fact, MacPlay is so committed to Mac OS X that it produced *Giants: Citizen Kabuto*, an action and real-time strategy game, for Mac OS X *only*—just to take advantage of the new system's enhanced graphics and performance.

Apple is counting on Mac OS X to draw in game developers. "Mac OS X has allowed us to create a renewed interest in the gaming community," says Bard Williams, Apple's senior manager of worldwide markets. Not only does OpenGL appeal to developers, but Mac OS X is an open-architecture platform. "It means that, in some cases, actually writing games for the Mac and porting games from other platforms is less of an issue," Williams says.

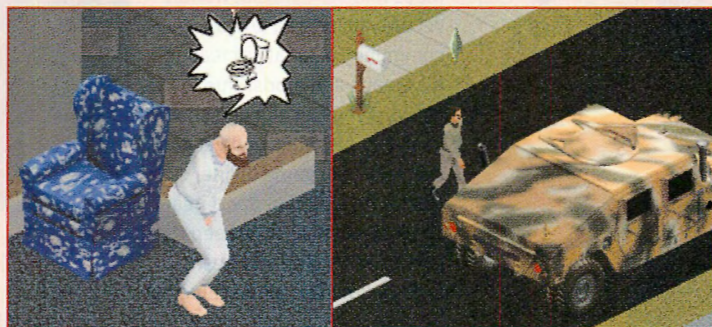
Great Shareware

"It's a labor of love," says Colin Lynch Smith, vice president of Freeverse Software, about shareware games. Shareware's indie feel has traditionally appealed to diehard Mac fans, and the low try-before-you-buy price appeals to just about everyone. Industry insiders have varying perspectives on where shareware is headed, though. Smith says the high cost of creating graphically rich games is prohibitive for some shareware developers. On the other hand, according to Williams, Mac OS X's powerful developer tools and Unix underpinnings are enticing new shareware authors to enter the scene—especially Unix programmers. He adds that Apple has already noticed an explosion in shareware for Mac OS X since the OS's release.

It's clear that Mac gaming is here to stay—and to flourish. So perhaps this decade's Matthew Broderick, battling this decade's AI villain, will do so on a Titanium PowerBook G4.



MacPlay made *Giants* available only for Mac OS X to take advantage of the OS's enhanced graphics capability. It shows.



Helping virtual people pee and make their carpool in *The Sims* turned out to be more thrilling than any game developer could have imagined.



The simulation game *Tropico* is a great place for newbies to start gaming—and to lead an island à la Castro, if only virtually.

Tips for Nongamers

If you've never fragged your neighbor, dealt a hand of Solitaire, or put a Sim to bed with your Mac, you're simply not getting the most out of your machine. Here is some advice to get you started if you're new to the world of Mac games.

Evaluate Your System

Especially if you want to game on Mac OS X, you'll need at least 400MHz of processing power and ideally 256MB of RAM.

Know Thyself

Play a game you'll actually enjoy. Don't play a shooter just because you think it'll christen you a serious gamer.

Check Out Shareware

Shareware games are a good way to get your feet wet. They're easy on the system requirements and the wallet.

Watch Trailers

Go to www.apple.com/games and check out game trailers, which are QuickTime movies about games. Trailers give you a sense of the entire game, whereas demos can leave you mired in the first few levels.

Be Patient

Games can be complex, so take the time to learn how to play. You won't regret it.

- Velocity releases *Spectre*, the first networkable 3D shoot-'em-up.

1994

- Id Software releases *Wolfenstein 3D*, the popular 3D shooter.
- Bungie releases the Mac-only game *Marathon*, which marks the beginning of the story-driven shooter.



1996

- Westwood Studios releases *Command & Conquer*, the first real-time strategy game.

1997

- MacSoft releases *Duke Nukem*, which becomes the best-selling Mac game of the summer.
- MacSoft releases *Civilization II*, from the series that popularized turn-based

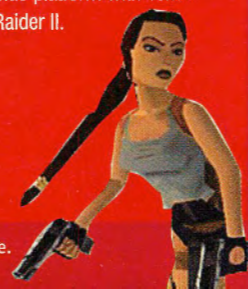
strategy games for the masses.

- MacSoft releases the original *Quake*, which spawns an insanely popular first-person shooter series. (Activision would later publish *Quake II* and *III*.)

1998

- Bungie releases *Myth*, the first 3D real-time strategy game.

- MacSoft ships *Unreal* for the Mac, giving birth to another insanely popular first-person shooter series.
- Aspyr brings *Lara Croft* to the Mac platform with *Tomb Raider II*.



2000

- Aspyr releases *The Sims*. The best-selling Mac game for at least six months in 2001 (according to NPD Intellect data). *The Sims* brings gaming closer to nongamers.



TOP GAMES

by the MacAddict Staff

Mac users have long complained about the dearth of games for our beloved platform, yet we think our list of the top three games in each of 11 different genres proves that Mac gaming is better than ever. These are not the best Mac games of all time—

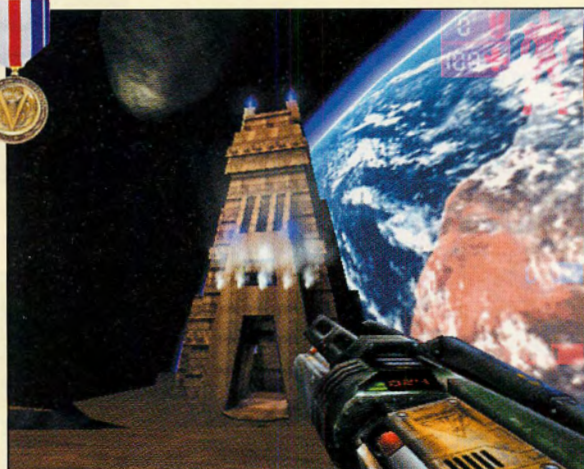
SHOOTERS

First-person games that require you to run around like a madperson shooting everything in sight. No plot necessary.

Unreal Tournament

MacSoft (www.wizardworks.com/macsoft), \$39.99

Unreal Tournament has everything we want in a game: powerful, versatile weapons; maps that are epic and worldly yet easy to master; and a community of fanatics creating new maps and mods. True to the genre, if you can aim and shoot, you're in, but when you get good and take your game online, there's no end of *better* Unreal Tournament players to keep the game challenging and fresh. Bottom line: This game came out in early 2000, and almost two years later, it's still costing us sleep. **Barrier to Entry: Medium**



Why settle for one rocket when you can fire off a spread of five of them simultaneously?

Quake III: Arena

Activision (www.activision.com), \$19.99

Who needs a plot when you've got the best eye candy? Certainly not us. Quake III's animated blood and gore, rich atmosphere, vivid effects, and awesome deathmatch action raised the bar for Mac shooters when it came out approximately two years ago. Quake III would certainly be at the top of the shooter heap if not for Unreal Tournament, which offers more levels and more-complex gameplay. **Barrier to Entry: Medium**



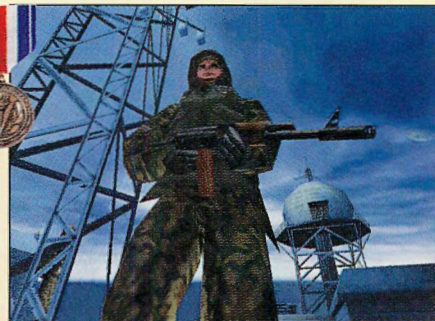
Quake III brings cartoon violence to a whole new level.

Rogue Spear

MacSoft, \$49.99

Rogue Spear is a game of contradictions, as thoughtful as it is violent and as tactical as it is chaotic. Lead a squad of elite counterterrorists against—you guessed it—terrorists. Multiple missions mean a detailed and compelling game for single players, but the squad-based combat becomes even more addictive as an online multiplayer game. Although the graphics in Rogue Spear aren't as technically sophisticated as those in Quake III or Unreal Tournament, the storyline and missions more than make up for it.

Barrier to Entry: Medium



Speak softly and carry a big gun.

Barrier to Entry

We rated each game on its barrier to entry—how easy it is for neophytes to learn the game. Here's what our ratings mean.

Low—You pretty much know what to do the minute you start up the game.

Medium—You may start out a bit puzzled, but it doesn't take long to get the hang of things.

High—This game is hard-core! You need lots of practice and experience to master it.



Games with this logo are no longer readily available from their publishers (which is why we don't list a price), but you can still find them by spelunking around eBay and hitting up Mac newsgroups (go to Google, click Groups, and search for "Mac games"). Chances are, if you're looking for a game, someone's selling it.

that's why you won't see a classic like *Marathon* in our list. Rather, these are the games you should be playing now. With a few exceptions, all of them are still available from their publishers (we've marked the ones that aren't), and without exception they're

all fantastically fun to play. Oh, and in the spirit of the Winter Olympics coming up next month, we decided to rank the games and award gold, silver, and bronze medals in each category—after all, a bit of friendly competition never hurt anyone.

ROLE-PLAYING GAMES

Games in which players assume the role of an individual or group and interact with other characters on their journey. Think D&D.

Diablo/Diablo II

Blizzard Entertainment
(www.blizzard.com), \$29.95

In the überpopular *Diablo* series, you play a hero on a quest to defeat the Prime Evils. Traditional RPGs require careful strategy and resource management, which can intimidate some players. *Diablo* eases first-timers into gameplay, allowing them to learn quickly about balancing gold, weapons, armor, magic, and abilities. The more powerful you become, the more time you'll spend glued to the computer. **Barrier to entry: Low**



All right, you crazy kids, settle down!

Fallout ☹️

Interplay (www.interplay.com)

Role-playing games often feel stilted and forced, with the game's interface and time demands getting in the way of good fun. Not so with *Fallout*, second only to *Diablo* in its ability to keep the action going and allow a sense of freedom with its nonlinear gameplay. In a postapocalyptic future, your mission is to save the other residents of your fallout shelter. *Fallout* presents an inspired look and feel with a biting, satirical sense of humor—it's great to play for that alone. **Barrier to Entry: Medium**



This wouldn't be so fun in real life.

Baldur's Gate II: Shadows of Amn

MacPlay (www.macplay.com), \$49.99

Baldur's Gate II is a massive, nonlinear affair that manages to capture much of the feel of dice-and-paper RPG play. The game may be difficult for newbies because it incorporates a large chunk of the rule set of *Advanced Dungeons and Dragons*, one of the most popular RPGs. If you haven't played D&D before, you may feel lost. But experienced gamers will appreciate the game's attention to detail. **Barrier to Entry: High**



Baldur's Gate II is a party and a half.

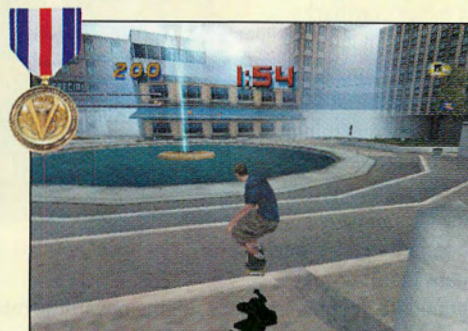
SPORTS

Games that simulate an actual sport (as if you couldn't figure that out).

Tony Hawk's Pro Skater 2

Aspyr Media
(www.aspyr.com), \$44.95

OK, so you're not a *real* gamer, you've never ridden a skateboard, and you're about as Xtreme as Al Gore. Even then, you are not excused from playing



Tony does Philadelphia.

Tony Hawk's Pro Skater 2. This game is so exceptionally fun that it should appeal to anyone who has a pulse, even if you aren't a skateboarder or a hard-core gamer. The goal is to perform adrenaline-pumping tricks and accomplish a set of goals in eight skateboarding venues. It's the thrill of skateboarding with none of the bruises. What could be better? **Barrier to Entry: Medium**

Madden NFL 2000

Aspyr Media, \$19.95

The *Madden NFL* football series is one of the most popular, best-selling, best-designed video-game legacies in history, regardless of platform. When Aspyr first brought *Madden 2000* to the Mac, the game far outstripped any other sports title available on our platform at that time. Unfortunately, the 2000 version is starting to show its age, making it vulnerable to getting bumped from the gold medal spot in sports. **Barrier to Entry: Medium**



That's the stuff.

Links LS 2000

MacSoft, \$49.95

It may not get your pulse rate up, but one thing we can say about *Links* is that it comes closer than any other Mac sports game to being exactly like the sport it's based on. In fact, in many ways *Links* is every bit as fun as actually playing golf (how much that says about *Links* and how much that says about golf is an issue we'll leave alone). Rich scenery and an easy-to-play, smooth game dynamics make *Links* a first-class sports game. **Barrier to Entry: Low**



No green fees or allergies...

Hall of Fame

Games don't have to be beautiful 3D grandiosities to be fun. Some of the most memorable moments in Mac gaming were simple 2D, black-and-white affairs. Here are some of our favorite games from the past.

Dark Castle

Besides being one of the best platform games ever made (you jumped around throwing rocks at bats and guards, hoping to defeat the Dark Knight), *Dark Castle* had some of the most memorable sound effects.



Glider Pro

You wouldn't think piloting a paper airplane through a series of rooms, catching updrafts from floor vents and avoiding obstacles, would make a great game, but it did.



ACTION AND ADVENTURE

Games (usually third-person) that feature fighting, shooting, climbing and follow some sort of storyline (no matter how lame).

Deus Ex

Aspyr Media, \$29.95

Deus Ex has a couple of minor drawbacks that prevent it from attaining gaming godhood, but it gets close. For one thing, the system requirements are as high as those of any Mac game ever, and for another, the game's many features might



That high-powered sniper rifle is a little much for these close quarters.

intimidate neophytes. That said, the rewarding mixture of stealth, tactical espionage, and all-out blasting makes this first-person action game the best of its class and a game you can play in an infinite number of ways. Think of it as Unreal Tournament the game meets *Mission: Impossible* the movie. **Barrier to Entry: High**

Oni

Bungie (www.bungie.com) and GodGames (<http://oni.godgames.com>), \$39.95

Overshadowed in publicity by Bungie's other child, Halo, Oni is still a brilliantly addictive shooter with adventure elements. Oni's fast-paced third-person gameplay makes for an experience more akin to a console game, a nice change for Mac users. Controlling



What? Nobody else wants to play with Konoko anymore?

Konoko, the lead protagonist, becomes a task every bit as absorbing as the game's puzzles and exploration challenges. An enjoyable tutorial at the beginning makes the game easy to learn and get into.

Barrier to Entry: Low

American McGee's Alice

Aspyr Media, \$49.95

Based on the Lewis Carroll classic, American McGee's Alice is a great action-adventure game. Macabre versions of the Cheshire Cat and the Mad Hatter greet Alice as she fights, swings, riddles, and swims her way through Wonderland's nine regions. The game requires wit for guiding Alice through psychedelic mazes and solving cryptic riddles, as well as brawn for destroying the evil Centipede and cannibalistic Duchess. Warning: The gorgeous graphics and spooky music can induce nightmares. **Barrier to Entry: Medium**



The Caterpillar offers Alice advice on how to save Wonderland.

STRATEGY

Games in which you control and manage a group or a mission and are responsible for everything from the deployment of troops to resource management.

StarCraft

Blizzard Entertainment, \$9.95

StarCraft is a real-time strategy game set in space. You control your armies of Terran, Zerg, and Protoss races to do battle, while defending your forces' territory. As you build up your army with an offensive, you have to make sure your defensive strategy will



In a moment reminiscent of *Starship Troopers*, hundreds of enemy Zerg swarm your Terran army, forcing a retreat.

keep the enemy from kicking your butt. The constant masterminding of combat plus resource management is a challenge, but once you get the hang of it, you *will* be addicted. Warning: If you want to be productive, do *not* keep StarCraft near your Mac. **Barrier to Entry: Medium**

Civilization II

MacSoft, \$19.99

Civilization II is an awesome game for all of you who want to pursue your goals of world domination. Based in history (sometimes loosely), Civilization II allows players to choose a group such as the Chinese, American Indians, or Vikings and do their best to use diplomatic, technological, economic, and



Early Viking civilization is developing quite nicely, thanks to a couple of borrowed Russian cities.

military tactics to win out over other factions. The game is brilliant but does get stale over time—certainly more quickly than StarCraft, which has a plot and episodes to keep things moving. **Barrier to Entry: Medium**

Myth II ☹

Bungie

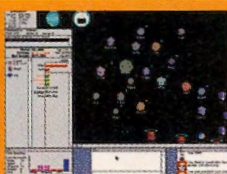
The folks at Bungie had a brainstorm one day—take the resource-management aspects out of real-time strategy games and see what happens. The result? Myth II (the follow-up to Myth), a real-time fantasy game that's about tactics more than anything else. In Myth II, players control a group of warriors, archers, dwarves, and other magical types in a quest to save the world from impending evil. The control system, with its orbiting camera, is brilliant, but it takes a little getting used to. **Barrier to Entry: Low**



Just about everything in Myth II, including these pumpkins and melons, is a target for this explosive-wielding dwarf.

Spaceward Ho

In the annals of turn-based strategic conquest games, Spaceward Ho boasted a combination of resource management and space combat—and it was multiplayer.



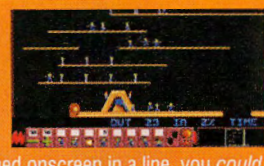
Spectre

Fans of the game Battlezone appreciated the Spectre series, in which you battled other armored vehicles, flying enemies, and pools of acid with your tank.



Lemmings

By assigning different skills (such as mining, digging, and parachuting) to lemmings that marched onscreen in a line, you could save them from themselves and bring them to safety.



SIM AND GOD

Games that simulate fictionalized real-life situations, allowing players to build cities, empires, or neighborhoods and then micromanage their day-to-day happenings.

The Sims

Aspyr Media, \$49.95

The Sims is simply one of the most entertaining games we've ever played in our lives—perhaps because you get to control *other* people's lives. In The Sims, you create and control a person, household, or neighborhood of people, making sure they eat when they're hungry, sleep when they're tired, and pee when the need arises. You can even decorate your Sims' houses with the bacon they bring home from their jobs. The game is more fun than you can possibly imagine. **Barrier to Entry: Low**



Sims need to dance and be merry in order to keep their Fun and Social levels up.

Tropico

MacSoft, \$45

More intellectual than The Sims but more humorous than Sim City (the original city simulation game), Tropico appoints you el presidente of a podunk Caribbean paradise. You manage your people's needs for jobs, housing, social services, and fun. Do a good job, and you end up rich. Screw up, and you get ousted. Like any third-world leader, you fix elections, kiss a superpower's ass, and pad your Swiss bank account—all to a perky Calypso beat. **Barrier to Entry: Medium**



How embarrassing! Your people are living in shacks next to your palace.

Railroad Tycoon II

GodGames, \$19.95

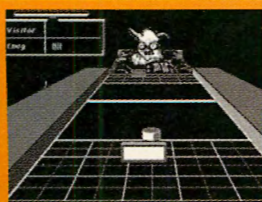
Railroad Tycoon II combines all the elements of a good simulation game—it's engaging, realistic enough to keep you on your toes, and complex enough so that you don't master it quickly. You assume the role of chair of a major railroad company and build a railway empire from the ground up. A variety of difficulty levels makes the game surprisingly approachable for novices without compromising the game for experts. **Barrier to Entry: Medium**



Railroad Tycoon II is the perfect way to see if you're cut out for the life of a railway mogul.

Shufflepuck Café

Air hockey without the sticky bowling alley against alien foes with various playing styles—what's not to like?



Ancient Art of War

One of the earliest Mac strategy games, Ancient Art of War pitted the player against legendary military leaders such as Sun Tzu, Geronimo, Alexander the Great, and Crazy Ivan.



BOARD, CARD, AND PARLOR

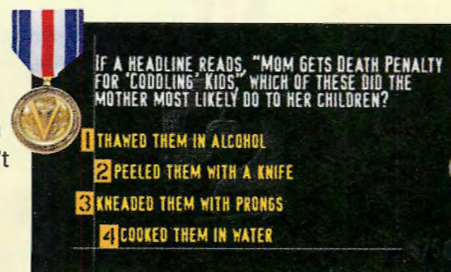
Family-style games that range from trivia to casino to board to classic game-room games.

You Don't Know Jack Jumbo Pak

Sierra (www.sierra.com), \$39.95

If you've never played You Don't Know Jack, you don't know jack about what you're missing. Not only are the questions in this trivia game challenging, they're also humorous. For instance, one question asks: "If Rocky the Flying Squirrel became a 'Flying Wallenda,' what would he be?" (Answer: *a gray tightrope walker with a moose pal*, but you knew that, right?) Factor in one smart-ass emcee, and you have simply the best trivia game ever. The Jumbo Pak is a compilation of five YDKJ CDs and contains more useless trivia than you can shake a stick at.

Barrier to Entry: Low



The trivia can be a little gruesome, but that's what we like about this game.

Chessmaster 6000

Ubi Soft Entertainment (www.ubisoft.com), \$39.99

Why buy the Mac version of a game you can play with friends in the so-called real world? Simple: Because your friends aren't as smart or as patient as Chessmaster 6000. This beautifully designed game's coaching capabilities—including spoken tips—can make you a better player, and you can advance your rating by playing against one of its 64 preprogrammed personalities, all with different rankings. It can even amuse you—try a game against bottom-feeders Clyde or Josie. **Barrier to Entry: Medium**



Replay dozens of famous games—surely you recognize the sixth Reykjavik match game between Bobby Fisher and Boris Spassky.

Hoyle Casino

Sierra, \$29.95

Feed your gambling vice without losing your shirt, reeking of cigarettes, or having to listen to some ol' blue-hair yammer on about the dry mashed potatoes in the buffet. Hoyle Casino is a virtual Vegas venture that packs in more value than most games of its kind, offering poker, blackjack, pai gow, craps, roulette, slots, keno, baccarat, horse racing, and more. The animated players' onscreen banter provides an entertaining backdrop, though the humor and theatrics in the current version aren't as hilariously over the top as those in previous releases. **Barrier to Entry: Low to Medium (depending on the game)**



The built-in Face Maker lets you create your own character—like our Princess Leia, who's winning at the poker table.

Strategic Conquest

One step above turn-based strategy games, Strategic Conquest was a predecessor to biggies such as StarCraft and Civilization.



DRIVING AND RACING

Games that simulate driving, often in a race.

Star Wars: Episode I Racer

LucasArts Entertainment
(www.lucasarts.com)

Strapping a couple of jet engines onto a small pod hovering a few feet off the ground makes for a heart-pounding movie scenario, but what makes Episode



It may look cold outside, but we are on fire!

I Racer our racing gold medalist is fast action, great graphics, and superbly balanced gameplay. Oh, and let's not forget the amazing sound, innovative tracks, and bevy of upgrade options that keep you returning again and again to earn that last bit of power for your ungodly turbo-chariot. **Barrier to Entry: Medium**

Driver

MacSoft, \$29.99

Driver may not be the slickest port job MacSoft's ever done, but it sure is damn fun to play. Hop in a muscle-bound, petrol-swilling meathead of a car and submerge yourself in the sheer



Aww, crap, there goes our hubcap.

lunacy of a 1970s car-chase movie. Driver doesn't quite maintain the consistency of graphics or evenness of play that puts Episode I Racer on top, but its 180-degree-sliding, tire-squealing, street-jumping action is still really cool. **Barrier to Entry: Medium**

4X4 Evolution

GodGames, \$39.95

Mud-splattered SUVs never look quite as pretty in life as they do in 4X4 Evolution. Just try to sneak in a game without drawing a crowd to your monitor.



Ahh, the end of another perfect day.

The gameplay itself is ultrarealistic, making getting started on 4X4 a test of your patience (heck, even after you get the hang of these trucks, the racing part can drive you to punch things once in a while). Over the long haul, though, this level of physics detail makes 4X4 a landmark in Mac racing. **Barrier to Entry: Medium**

FLIGHT

Games that put you in control of any kind of aircraft.

Falcon

MacSoft

Falcon ain't no Easy Street, but it's a whole lotta fun packed onto a single disc. In most scenarios, aircraft and ground forces are trying to destroy you. If you're willing to tangle with the tough learning curve by spending solid time on the very thorough manual and the training



Talk about attitude! Flying sideways is one of many basic handling techniques you'll learn in Falcon.

missions, your growth as the pilot of an F-16 is only the beginning—you can really hone your tactical combat skills. The realism is excellent, and though you're permanently stuck in the Korean skies, the scenery is terrific. **Barrier to Entry: High**

Fly Series

MacSoft, \$39.99

Fly makes the experience of flying palpable. Less action-oriented than combat sims like Falcon, Fly is especially useful for amateur pilots, taking realism to a new level—for example, the moon, stars, and lighting effects adjust automatically to the time and date on your system clock. For true-to-life weather conditions, you can download the current METAR aviation weather report from the Web. The aircraft range from trainers to helicopters, the scenery is spectacular, the options for flight planning are endless, and you have airports worldwide at your fingertips. **Barrier to Entry: High**



If only we had some wine and roses as we flew over the Eiffel Tower...but alas, the flight deck is no place for romance.

F/A-18 Korea

Graphic Simulations (www.graphsim.com), \$29.95

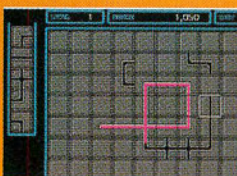
Set in a fictional time when the U.S. and North Korea are involved in a military skirmish, F/A-18 Korea puts you in the cockpit of a multirole combat aircraft with several missions to choose from: shoot down enemy planes, bomb targets, and so on. The hardest part about F/A-18, besides dropping a nuclear bomb and living through the shockwave to tell about it, is learning the avionics of a combat aircraft. However, for fans of air-combat simulation, this game is a must-play. **Barrier to Entry: High**



Always wanted to join the Air Force? Here's your chance.

Pipe Dream

Tetris meets Department of Water and Sewer. You played the plumber with a limited set of pipes. Incredibly addictive.



Wolfenstein 3D

A great early first-person shooter (by Id software). You were a commando who infiltrated a Nazi castle to end the nefarious goings-on there.



Marathon

The classic first-person shooter that would define all others, Marathon combined amazing action with one of the best video-game stories ever.



ARCADE

Simple action games or games that simulate old arcade games; usually high on fast-paced, repetitive action and low on storyline.

Maelstrom

Ambrosia Software (www.ambrosiasw.com), \$15

Based on the massively popular arcade game, Asteroids, Maelstrom adds kitsch appeal with its colorfully cute and curvy 3D graphics and old-school sounds. Fly your chubby toylike spaceship through the vast darkness, shooting asteroids, flying saucers, metal balls, and spiky mines that become increasingly aggressive as you blaze through levels. Though you can argue that the gameplay is prehistoric compared to today's 3D-rendered games (the game was released in 1992), Maelstrom is mindless entertainment at its very best. **Barrier to Entry: Low**

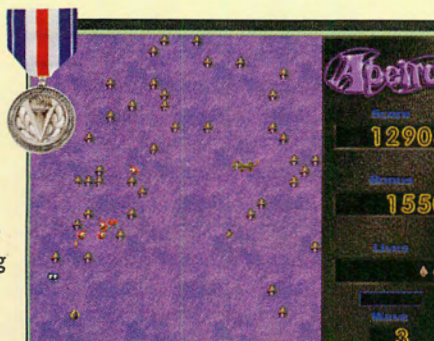


Who's got time to learn confusing key combinations? Maelstrom brings pure, simple entertainment to the desktop. 'Nuff said.

Apeiron

Ambrosia Software, \$15

Even raging tendonitis, caused by hours of furious mouse clicking, couldn't stop us from playing this insanely addictive game. Best described as Centipede rambling through the looking glass of Oz, Apeiron has you shoot off your plasma cannon to decimate animated sneaker-wearin' Pentipedes, dive-bombing fleas, a bouncing scorpion, wayward UFOs, and more, all while navigating through a funkadelic mushroom patch and trying to gobble up a menu of yummys (secret powers hidden in coins). Got it? **Barrier to Entry: Low**



Shooting a dividing Pentipede will get you ahead—or two or three heads—in the game.

Battle-Girl

Green Dragon Creations (www.greendragon.com), \$25

Times are tough in the Great Machine. Terminus, Weapon of Chaos, has come to undo the programs that maintain order. Your mission as Battle-Girl is to destroy his nefarious programmers. If you don't, big, bad Terminus will come to liquidate you, assisted by a series of fighter escorts of escalating ferocity. The game has a style reminiscent of old vector-graphics arcade games, but don't let the retro look fool you—it takes lightning-fast reflexes to survive the game's 99-plus levels. **Barrier to Entry: Medium**



Battle-Girl's ship is trapped! The aptly named Terminus moves in for the kill.

POTPOURRI

Any game that didn't fit neatly into another category. (Hey, give us a break!)

Tetris Max

Opinicus Microtech (www.kidsdomain.com/down/mac/tetrismax.html), \$10

What can we say about Tetris except that it is hands-down one of the simplest yet most addictive games in the universe? The object is to drop puzzle pieces of different sizes and shapes from the top of the screen to form complete lines at the bottom of the screen. You can find many different flavors of Tetris out there, but Tetris Max is one of our favorites. Whether you need a 5-minute (gaming!) quickie or a longer diversion, you can't go wrong with this classic. **Barrier to Entry: Low**



The puzzle pieces drop in faster as you go through the levels. That's why we're starting to suck at this point.

Myst

Ubisoft Entertainment, \$9.99

One of the best-selling games of all time, Myst pulls you into a strange and beautifully rendered world of puzzle solving, exploration, and adventure. There are no guns and you cannot die. It's a good first game for the casual gamer because you can play at your own pace, and its point-and-click interface keeps navigation simple. **Barrier to Entry: Low**

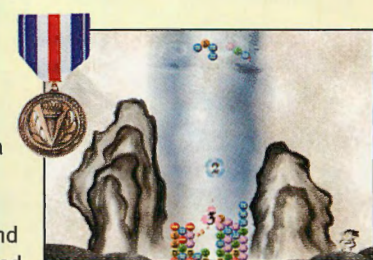


For a game that came out in 1993, Myst still looks darn good, with its beautiful, photorealistic rendering.

Burning Monkey Puzzle Lab

Freeverse Software (www.freeverse.com), \$19.95

It's a Tetris-like game with a simian twist. You (and a support staff of monkeys wearing lab coats) rotate and arrange falling sets of colored orbs in the name of science. You can connect to Freeverse's game server to play Puzzle Lab with others over the Internet. When that becomes a little too much, you can switch the game to Zen mode for a more tranquil playing environment. With basically just three controls to contend with (two for rotate, one for drop), anybody can play this game. **Barrier to Entry: Low**



Feel the ball. Ommm. Feel the ball. Zen mode can really calm your nerves.

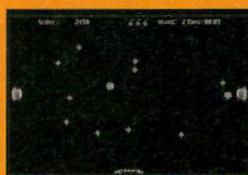
A-10 Attack

Although the flight simulation engine in A10 Attack was liquid-smooth (a real feat for the time), what really made this game stand out was the ability to field multiple A-10s on the same mission, switching from cockpit to cockpit.



Crystal Quest

In a weird, wonderful combination of Pac-Man and Asteroids, Crystal Quest boasted some of the best gameplay and quirkiest sound effects ever to make their way to the Mac.



Escape Velocity

This classic 2D space shooter and adventure game had depth, humor, and adventure. You piloted your spaceship in search of credits, gear, and the solution to a mysterious threat to humanity.



GIVE NEW LIFE TO OLD

by Patrick Baggett

The Truth About Mods, Maps, and Skins

A game mod (short for modification) is a change to a game, whether it involves altering rules, weapons, or even goals. Typically mod developers are not trying to reinvent the game, just spice it up. For example, if the original game features a big-ass blaster, a mod might feature a superbig-ass blaster with an extra grenade launcher. More-subtle mods may simply tweak the rules in a capture-the-flag match.

Mods differ from other gameplay alterations like maps and skins. New maps mean new areas in which to play the game—same game, new scenery. Adding new skins offers a similar experience to the original game, but instead of changing the scenery, you're altering the way your characters look.

Mods, maps, and skins are free and are either official (created by the original game developer) or unofficial (developed by some random guy in the Midwest). Don't expect greatness every time—and get ready for a sometimes miserable installation process. To get many downloads working, you have to follow some pretty cryptic instructions—that is, if you're lucky enough to get instructions at all.

UNREAL TOURNAMENT

The large collection of clever upgrade mods for Unreal Tournament increases firepower, mutates weapons, and generally attempts to take this first-person shooter's action to the next level. One of our personal favorites is Akimbo Arena, which makes it possible to carry two of each weapon at the same time. John Woo would be so proud.

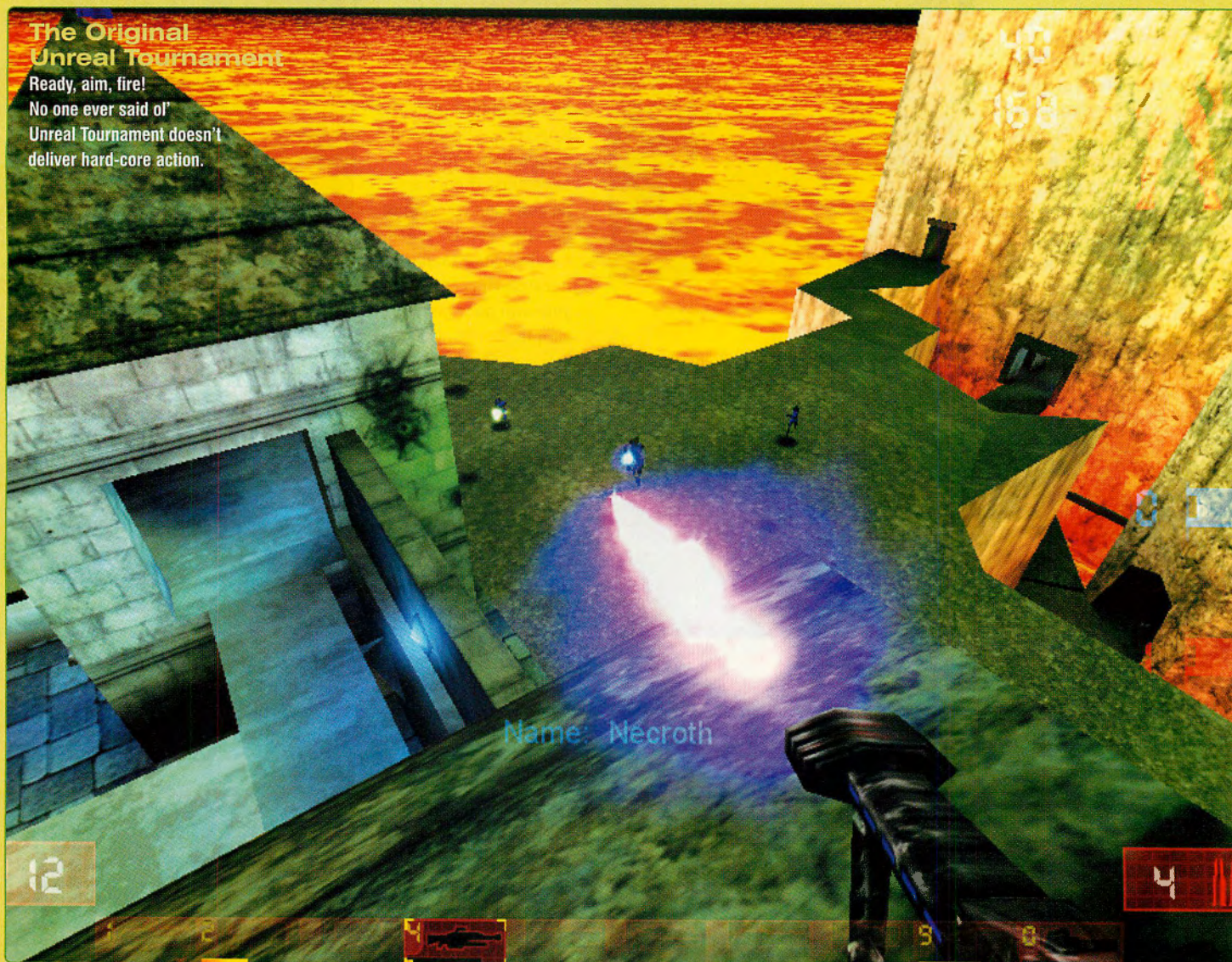
Other mods offer completely new gameplay models. For example, in one mod called Holy Wars, players compete to find a randomly placed Halo. Once you find the Halo, you become the "redeemer" in a world of sinners. Jerry Falwell would be so offended.

How to Install Unreal Tournament Mods

While some games make you jump through hoops to install new mods, you can install most Unreal Tournament mods in one easy step. The UMOD Installer is a nifty little utility that you can download for free (www.westlakeinteractive.com/download0013.html). Just drag any Unreal Tournament mod that ends with a .umod extension onto

The Original Unreal Tournament

Ready, aim, fire!
No one ever said ol'
Unreal Tournament doesn't
deliver hard-core action.



GAMES

No matter how much you love them at first, even the greatest games eventually lose their luster. But wait—don't head to eBay just yet. There's still plenty of life in those old games. All you need are some hot mods, maps, and skins, and you'll be exploring new worlds, blasting unfamiliar enemies, and milking your old games for everything they're worth. And best of all, it won't cost you a penny.

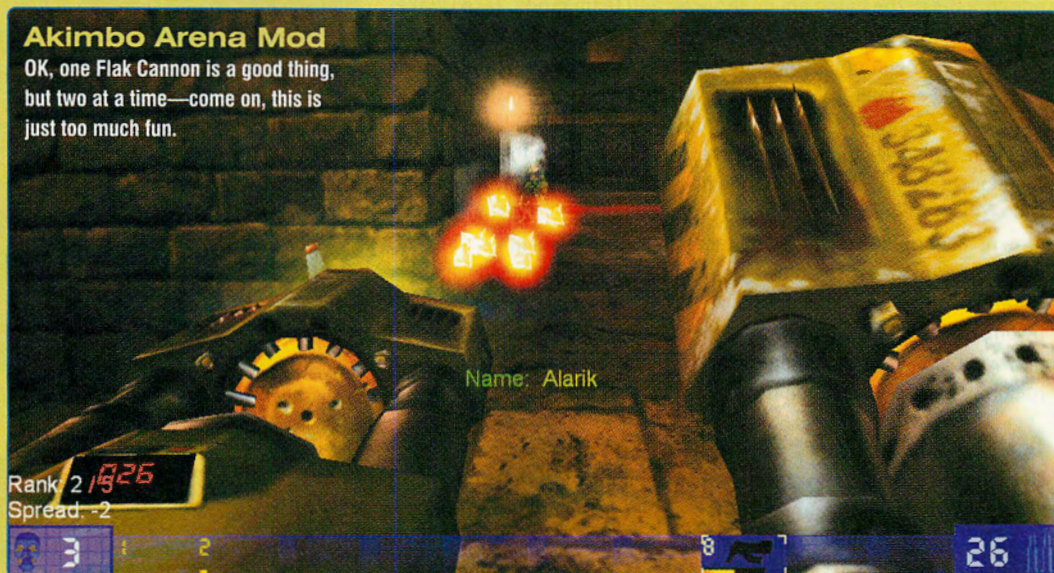
the UMOD installer, and UMOD takes care of the rest for you. Some of the Unreal Tournament mods at the sites listed below are not in the .umod format. For these you will have to follow the specific instructions that come with them.

Where to Find Them

www.utbooty.com
www.macgamefiles.com
<http://download.cnet.com>
www.planetunreal.com (this site is PC-centric, but there's some Mac stuff)

Akimbo Arena Mod

OK, one Flak Cannon is a good thing, but two at a time—come on, this is just too much fun.



Name: Alarik

Rank: 2
Score: 1626
Spread: -2

26

Holy Wars Mod

If someone has already beaten you to the halo, your mission is to use any means (aka kill that sucker) to get it back for yourself.



Name: Dessloch

Dessloch is the Saint! Kill that bastard!

Rank: 5 / 5
Score: 5
Spread: -9

29

QUAKE III

So you've logged hundreds (or is it thousands?) of hours shooting at mortal enemies in Quake III—it's time to mix it up a little. The best addendums to the game are multiplayer and team mods. Take Quake III Fortress, for example, which includes team-play elements, 11 new weapons, new gameplay rules, and lots of extremely cool new maps for multiplayer Quake III. (As of this writing, Fortress was still in beta form, but we found it more than stable enough to enjoy.)

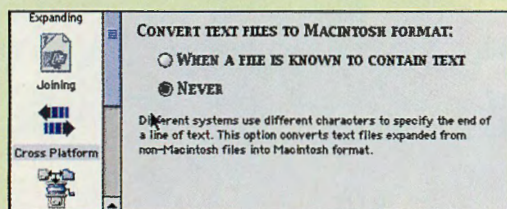
There's also Weapons Factory Arena (a follow-up to the immensely popular Quake II Weapons Factory mod), which completely reinvents Quake III's weapons selection and adds tons of new challenges in the form of laser defenses and flying reconnaissance units (for spying on enemies). You may also enjoy some total conversion mods such as Urban Terror, an unofficial mod that re-creates the Quake III experience by bringing realistic urban warfare to your desktop. This baby gives you new weapons, scenery, enemies, and lots more sneaking around than the original Quake III: Arena had.

How to Install Quake III Mods

Unfortunately, there is no standard way to install mods in Quake III, which leaves you at the mercy of the installation instructions that usually come with the download. However, here are a few tips.

Before running any Quake III mods, make sure you are running at least version 1.27 of Quake III: Arena. While it's not too tough to find the Mac upgrade (search for *Quake III Mac update* or something similar), some versions we downloaded were faulty. Try downloading a reliable update from Mac Game Files (www.macgamefiles.com/detail.taf?item=10341). If you're running an updated version, you will see a Mods menu item on the game's main screen.

Before unstuffing the files you download, set your Stuffit Expander preferences to never convert text files to Macintosh format. Go to the File menu, select Preferences, click the Cross Platform icon, and click the Never button. Otherwise the unstuffing process may corrupt your mod files.



If you want to stop the corruption (at least in your Quake III mods), select the Never button.



The scenery may have changed, but it's still fun to unload a high-powered rocket launcher in Quake III Fortress.



Take to the streets in Urban Terror with realistic weaponry and search out your soldier opponents.

Where to Find Them

www.planetquake.com
www.download.com
www.macgamefiles.com

MARATHON

Despite the fact that the first game was released in 1994, the Marathon series remains popular with some Mac gamers. Of course, even the most loyal fan has surely played each of these adventure-shooter games many times over and is ready for an update. Enter Marathon Rubicon, a free update that takes the Marathon series to the next level. The best part about Rubicon is that you can play even if the original series isn't installed on your machine. You can also find a large selection of new maps for both Marathon and Marathon 2. In a strange crossover, you can even find Marathon maps re-created for play in Unreal Tournament. Now *that's* teamwork.

How to Install Marathon Mods

There is no completely standard way of installing mods for the Marathon series (since both games were developed before the golden age of the mod really began), but if you've got your eye on the Rubicon upgrade, don't worry. Double-clicking its installation icon will take care of everything for you.

Where to Find Them

www.macgamefiles.com



As far as graphics or superfast gameplay go, Marathon's still no Quake III, but the Rubicon update goes a long way toward bringing it into the modern age of gaming.

MYTH II

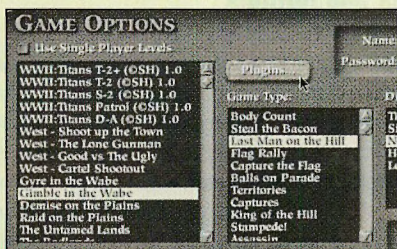
When you start searching for add-ons to this mythical-world strategy game, you're mostly going to find new multiplayer maps. This means you can end up in feudal Japan; the wild, wild West; or the bloodied fields of a famous WWII battle. For instance, the WWII Titans map redraws your Myth II world as a WWII battlefield, introducing more-modern soldiers, weaponry, and...oh yeah, tanks. Too much of a departure? You can also find a number of more-familiar maps that offer new terrain without straying too far from the original theme.

Although they're considerably rarer, you can find new single-player campaigns to play, such as the aptly named Myth II Solo Campaign, which offers several new levels, each with unique enemy forces and strategic details. You can also find mods with various weapon upgrades and character substitutes. We were particularly impressed with some of the WWII heavy artillery additions we came across.

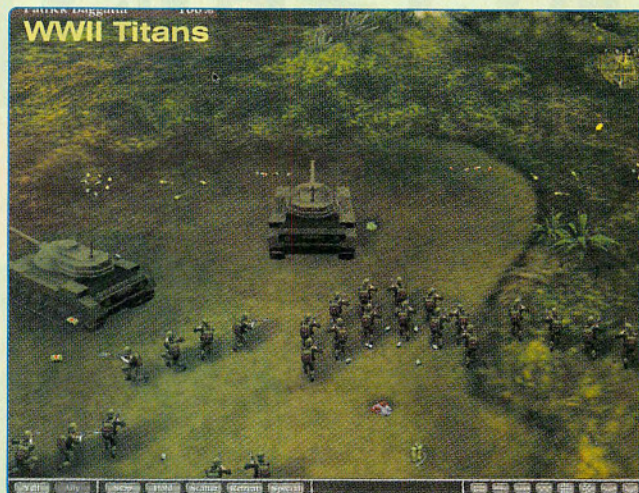
How to Install Myth II Mods

For most multiplayer Myth II mods, download and unstuff them, then drag them into the Plug-ins folder inside the Myth II folder. Once there, you can activate your mods in multiplayer mode by clicking the Options button, then the Plugins button—you will see the files you installed in the window that appears. Move the file names into the Active panel and start a new game to play with your new mods.

Note: When you install Myth II Solo Campaign, replace the entire Local folder in your Myth II folder (but don't throw it away!). To activate the new campaign, hold down the Shift key and click the New Game button. This replaces the single-player game with the new campaign. When you're ready to go back to classic action, replace the original Local folder.



Click the Plugins button to add new multiplayer maps for Myth II.



Tired of medieval creatures? How about a troop of rifle-toting foot soldiers?



Dark and scary scenery, wolves, and brand-new mission objectives are just a few of the things that make the Solo Campaign mod a whole new Myth II experience.

Where to Find Them

www.bungie.net
www.creationgames.com
www.insidemacgames.com/features/99/myth2/myth2mods.shtml
www.macgamefiles.com
www.download.com

RAINBOW SIX, ROGUE SPEAR

Are you one of those people who thinks Tom Clancy is a pretty good writer but you could create more-intriguing plots and twists? Guess what, you're not alone—and many of your fellow would-be novelists are turning to the art of making Rainbow Six and Rogue Spear mods as a way to prove their imaginative powers.

Not quite as prevalent as the Unreal Tournament and Quake mods that litter the Web, mods for these first-person shooters typically feature more-realistic updates. You'll find many new maps based on real-world locations and scenarios featuring realistic tactics, weapons, and soldiers. One of our favorites was a collection of WWII scenarios called WWII Weapons for Rogue Spear. Of course, not all the mods are so dedicated to realism. One called Steel Skulls reworks the first level in Rainbow Six to feature hordes of terrorists. Expect a bloodbath. And for the Web-weary among you, Rogue Spear actually comes with a full conversion mod in the box.

How to Install Rainbow Six and Rogue Spear Mods

There is no standard for installing Rainbow Six mods. You'll encounter everything from easy double-click icons to strange-sounding files you need to place in just the right folder. Most mod downloads come with instructions for installation—read them carefully.

In Rogue Spear, on the other hand, the process is considerably more streamlined. In the Rogue Spear Data folder, you'll find a Mods folder. Drag the mod folders you download into here. Start the game and click the Options button on the main screen. Next, click the Mods button and activate the mods listed there. Finally, start a new game to see the results.



The WWII-based Urban Operations add-on comes with the boxed copy of Rogue Spear.

Where to Find Them

<http://roguespear.3dretreat.com>
www.roguespeardatabase.com
www.download.com
www.macgamefiles.com

TAKE CONTROL OF YOUR

by Carrie Shepherd

GAMEPADS

How They Work

Gamepads make it easier for players to navigate and control games. Generally, they feature a cross-shaped D-pad (directional pad) that you can use to control a character or vehicle, as well as buttons for shooting, jumping, or other moves.

What They're Good For

Nearly every game type except sims and first-person shooters; perfect for sports games, action games, and emulated console games.

Weighing the Options

The advent of USB brought scores of controllers to Mac gamers—allowing them to share the wealth of products created for the bigger PC market. However, just because you can plug a gamepad into your keyboard doesn't mean it will automatically work, let alone with full bells and whistles. For example, the Gravis Force Feedback pads work with USB Macs, but the company does not support rumble effects for the Mac. Note, however, that developers have to build in support for Force Feedback and very few Mac games do (since the Force Feedback APIs for Mac only recently became available). Still, if you're looking for a Force Feedback pad, Macally's iShock II will do the trick.

Don't forget to read the system requirements. Some pads work with Mac OS 8, some require Mac OS 9, and many don't yet support Mac OS X. Many gamepads work only with games that support InputSprocket, Apple's programming code enabling games to communicate with the drivers for input devices.

TIP Mac compatibility for input devices can be hairy. If you have trouble getting a gamepad or joystick to work with your Mac, try the shareware USB Overdrive (\$20, www.usboverdrive.com). This universal USB driver handles all kinds of USB input devices and lets you configure them for your games. A Mac OS X version, if not out already, is coming soon. Thank heaven for shareware.



Features and Options

- **D-PAD** A standard eight-way D-pad is a purely digital device: It registers a push in one of eight directions. If you push left on a D-pad, the character moves 100 percent left. In contrast, a proportional D-pad provides the precision of an analog stick, for 360 degrees of control. Some controllers make you press a Mode button to switch between digital and analog control, which can be annoying.
- **ANALOG STICK** An analog controller offers more-precise movement than a digital D-pad. It allows gradual movement, like a steering wheel: Turn 10 degrees right, and the object you're controlling moves 10 degrees right.
- **PROGRAMMABLE BUTTONS** There's a vast array of button setups to choose from. A standard number is eight: four under the thumb, and four on the shoulders of the pad.
- **SHIFT BUTTON** This allows you to map additional functions to buttons—so if you press the Shift button along with another button, the latter will perform a new function.
- **TRIGGERS** Sometimes the pad has two triggers instead of shoulder buttons. Usually these are analog devices and make great substitutes for gas and brake pedals in driving games.
- **FORCE FEEDBACK** Also called rumble, Force Feedback makes the controller vibrate at key points in the game, such as when you crash into an opponent in a racing game.
- **TILT** Using motion-sensing technology, some gamepads allow you to tilt the controller to move. Several companies make such pads for the PC, but they're not available for the Mac—yet (don't worry, they're coming...we think).
- **THROTTLE WHEEL** Some pads include a small wheel to increase or decrease throttle, which controls the amount of fuel going to the engine in a flight sim.

Popular Products

CH Products, www.chproducts.com
USB Gamepad, \$29.95

Thrustmaster, www.thrustmaster.com
Dual Analog Gamepad, \$24.99

Gravis, www.gravis.com
Eliminator AfterShock Rumble Gamepad, \$39.99
Eliminator GamePad Pro, \$29.99
Xterminator Force Feedback Gamepad, \$69.99
Gamepad Pro USB, \$19.99

Logitech, www.logitech.com
WingMan Gamepad Extreme, \$39.95
WingMan Precision USB, \$9.95

Macally Peripherals, www.macally.com (shown)
iShock II, \$39 (see *Reviews*, this issue, p50)

Microsoft, www.microsoft.com/sidewinder
SideWinder Game Pad USB, \$24.95
SideWinder Game Pad Pro, \$34.95

Saitek, www.saitekusa.com
P150 USB Action Pad, \$14.95
P750 Digital Gamepad, \$29.95

GAMES

Will spending money on controllers really make playing your games more fun? The short answer is yes—if you spend a lot of time playing games, you *should* have a better experience once you ditch the keyboard in favor of a shiny, new, feature-laden controller. Here's a look at the best controllers for the types of games you love, their features, and how they work.

JOYSTICKS

How They Work

Back in the days of traditional action games, joysticks were required equipment for any self-respecting gamer. These days, they're much less essential. Gamepads work best for console-style action games, and the mouse works best for first-person shooters.

Still, serious gamers will want a joystick on hand for several reasons. First, joysticks are analog devices—that means you can send more-precise messages, depending on how far you move the stick. Move it a little left, and you send a 10 percent left signal, for instance. While many gamepads now have small analog sticks, their travel distance (the actual amount of movement available) is shorter, so they offer less precision than a full-size joystick. That makes joysticks essential for games that require precise control, such as flight sims.

What They're Good For

Flight sims, racing games, and classic arcade games that run on an emulator.

Weighing the Options

You want a joystick that feels comfortable and has easy-to-reach buttons. Unless you opt for a motion-sensing model (which can detect movement in the air), choose one with a rock-solid base so it won't slide all over the place when you're in the throes of battle. If you plan to use the stick for flight sims, get one with a hat switch and throttle.

Joysticks have different (and in some cases adjustable) amounts of dead zone, or "give" in the stick. Some gamers want a responsive stick so a minute change registers onscreen; others prefer a looser stick. Also, it's important to check the system requirements for the stick you have in mind.



Popular Products

CH Products

F16 CombatStick USB, \$74.95

Thrustmaster

Top Gun Fox 2 Pro USB Joystick, \$29.99

Top Gun AfterBurner, \$59.99

Gravis

Destroyer Aftershock, \$29.99

Logitech

WingMan Extreme Digital 3D, \$39.95

WingMan Attack 2, \$19.95

Macally Peripherals

AirStick, \$49

iStick, \$49

Microsoft

SideWinder, \$34.95

SideWinder Precision 2, \$54.95

Saitek

Cyborg 3D USB Gold, \$39.95 (shown)

Cyborg 3D Force Stick, \$49.95

X45 Digital Joystick and Throttle, \$79.95

Features and Options

- **TRIGGER** Most joysticks feature a trigger conveniently placed under your index finger on the front of the stick—great for firing missiles at enemy base camps.
- **HAT SWITCH** In addition to several programmable buttons, most joysticks have at least one small four- or eight-way mini-joystick on the back or top, called a hat switch. Use these for switching views on the fly with your thumb, or aiming a laser-guided bomb.
- **THROTTLE CONTROL** This allows you to control incremental actions such as thrust, throttle, and altitude. Some sticks have a small wheel or slider on the base for throttle control. Others, such as Saitek's X45, have a joystick-size throttle controller with its own buttons and hat switch.
- **ADJUSTABILITY** Unlike the cramp-inducing Atari sticks of old, today's best joysticks allow you to move different components around for total hand comfort (for lefties and righties alike). Some sticks allow you to adjust the sensitivity of movement.
- **TWISTING HANDLE** Some sticks, such as Microsoft's SideWinder Precision 2, twist in addition to moving forward, back, left, and right. It's another vector of control that you can use for rudder control in flight sims, among other things.
- **SHIFT BUTTON** The Shift button allows you to map additional functions onto buttons.
- **MOTION SENSING** Motion-sensing sticks, such as the Macally AirStick, can sense movement even in the air, making them ideal for those who don't have lots of desk space, since there's no clunky base to find room for.
- **FORCE FEEDBACK** Some sticks can use this technology to simulate resistance, such as turbulence in a flight sim. Unfortunately, most current Mac games don't support Force Feedback.

TAKE CONTROL OF YOUR GAMES

WHEELS AND PEDALS

How They Work

Steering wheels are rotary controllers, like real steering wheels—turn to the left, and the vehicle goes left. Turn a little, it goes slightly left. Simple enough. Pedals let you accelerate or brake in racing games, and can provide rudder input for the yaw axis in flight simulators, allowing desktop pilots to move the nose of their aircraft left or right.

What They're Good For

Racing games, flight sims, and, surprisingly, some old arcade games (on MacMAME), like Breakout, that once required Pong-style paddle controllers.

Weighing the Options

Make sure the place you play games has enough space to accommodate a wheel—after all, it needs to be stable in the face of aggressive maneuvers. If you can test it before purchasing, make sure the wheel feels solid and durable, is comfortable to grip (rubber padding helps), and supports the games with which you plan to use it.

All of the wheels we list come with pedal setups, so you won't need to buy them separately. However, if you're a hard-core flight-sim addict, consider CH Products' Pro Pedals. Just make sure the flight game you want to use with them supports the pedal's features. For example, Pro Pedals support the rudder and brake functionality in Fly, but only the rudders in Falcon 4.0. As always, check for compatibility with your Mac.

Features and Options

- **BUTTONS** Most wheels come with a few buttons (or even a D-pad) along the perimeter, or in the center where the horn should be. You can use these to select in-game options or you can program them.
- **GEAR-SHIFT PADDLES OR STICK SHIFTER** Wheels either have shifting paddles on the sides of the wheel, like Formula 1 cars, or an inline stick shifter on the base for a more realistic feel. Thrustmaster's NASCAR Pro Digital 2 offers both.
- **FORCE FEEDBACK** Some wheels have Force Feedback that lets you feel the virtual friction of wheel against road. (Unfortunately, virtually no Mac games right now support Force Feedback.)
- **PEDALS** Most wheels come with pedals that allow you to gas or brake. CH Products' Pro Pedals (sold separately) go the extra mile—not only do they press down like car pedals, but they also pivot to allow differential braking (toe brakes). The sliding heel-toe motion gives rudder input for the yaw axis in flight sims.



The Future: Not What It Used to Be?

People often mention virtual reality when they talk about the future of games. Yet the reality is that very few people are willing to strap on a giant helmet with two little screens inside to immerse themselves in their games fully. Why? First, it's tough to set the angle of the screens so that each eye has the correct input—plus, there's always a slight delay between movement and screen updates. Second, most devices require you to turn your head to look in a different direction—even though, in reality, you usually move your eyes to look at something. Add the weight of the helmet to these problems and the net result for most folks is a nauseating experience. VR may come of age someday, perhaps with lightweight goggles instead of clumsy headsets, but it likely won't materialize until the advent of Mac OS XX.

Line-of-sight controllers have been around for a long, long time (especially as devices to aid the handicapped). And though they haven't taken off in gaming yet, someday they might. These controllers have two parts: a lightweight part that attaches to your head and a small sensor you place on top of your monitor, which notices extremely small head movements and relays the information to your computer. These movements are far more subtle than those a VR helmet would notice, and the result is more realistic.

Popular Products

CH Products

Pro Pedals USB, \$149.95

Thrustmaster (shown)

NASCAR Pro Digital 2, \$59.99

Logitech

WingMan Formula GP (USB),
\$49.95

Saltek

R100 Sports Wheel, \$39.95
R220 Plug-and-Play Wheel,
\$39.95
R440 Force Feedback Wheel,
\$79.95

MICE

WIRELESS

SCROLL
WHEEL

How They Work

If you don't know how to work a mouse, you're probably reading the wrong magazine! Still, they're worth mentioning because they're really the best device for the strafing and shooting involved in playing shoot-'em-ups. In most first-person shooters, you use the mouse to control what you're looking (and aiming) at. In strategy games, you use the mouse just as you would in Word, albeit with a few more clicks and drags (and of course, you're moving around Orcs instead of sentences).

What They're Good For

First-person shooters, strategy games, adventure games.

Weighing the Options

Considerations for gaming differ from what you might want at the office. You definitely want a mouse with programmable buttons, not just the standard single button, and you need something sturdy that will stand up to a lot of movement. Consider an optical mouse for more accuracy.

If possible, get your hands on the mouse *before* you buy it. Consider mice that offer better comfort, such as those with finger and thumb grooves, as well as easy-to-grip rubberized sides.

Another consideration: While most mice (even PC mice) work on the Mac, you can't always be sure the driver software will. Make sure the mouse you buy supports the Mac.

PROGRAMMABLE
BUTTONS

OPTICAL TECHNOLOGY

Features and Options

- **SCROLL WHEELS** In shooters, these allow you to select weapons.
- **PROGRAMMABLE BUTTONS** You can program some mice so one click performs the same function as a series of keyboard presses—essential for fast-paced games.
- **OPTICAL TECHNOLOGY** Rather than transmitting the motion of a ball at the bottom of the mouse into movement onscreen (a quaint analog-technology holdover from the 1960s, when Douglas Englebart invented the mouse), today's slickest modern mice use digital technology. A special LED shoots red light under the mouse, and a reader uses the light to judge the mouse's position and speed with much more accuracy—and fewer skips—than would be possible with an old-fashioned mouse. Optical mice have better tracking speed, so they can keep up with the speed at which you move your hand. Mousepad not required.
- **WIRELESS** When you're in the heat of battle, the last thing you want to do is get hung up on wires!

Odds and Ends

If you're seeking the ultimate gaming setup, consider the following products as well. They're not for everyone, but they might be just what you need.

Yokes

Flight-sim enthusiasts will get the most realistic experience with a yoke. Unlike a joystick (used mainly in military planes and helicopters), most civil aviation planes, such as 737s and Cessnas, use yokes. You can pull a yoke toward you or push it away from you to control the angle of the plane's nose. CH Products offers two yokes for the Mac, the Flight Sim Yoke USB (\$149) and the Flight Sim Yoke LE (\$109.95).

Joystick Adapters

If you have controllers for other game systems already, you may want to invest in the JoyPort from Kernel Productions (available in USB and ADB configurations, \$39.95 and \$49.95, respectively, www.kernel.com). With it, you can use controllers for the Genesis, Atari, N64, or PlayStation with InputSprocket-compatible games on your Mac.

P5 Glove

What if you could simply pull your trigger finger to shoot your pistol or lift your palm to make a helicopter take off? Essential Reality's P5, a glove-like game controller due out at the end of January (\$129, www.essentialreality.com), is designed to let you do just that. You can assign keystrokes, mouse clicks, or even combinations of strokes to a single hand gesture. Wireless and left-handed versions are slated for the future.

The P5 Glove—weird yet cool.



A yoke simulates the feel of civil aviation planes.



Popular Products

Logitech

Cordless MouseMan Optical, \$69.95
Optical Mouse, \$19.95
MouseMan Dual Optical, \$49.95
Cordless Optical Mouse, \$49.95

Macally Peripherals

iOptiNet, \$39
MicroMouse, \$39

Microsoft, www.microsoft.com/hardware

IntelliMouse Optical, \$44.95
IntelliMouse Explorer, \$54.95
Wireless IntelliMouse Explorer, \$74.95 (shown)

Kensington, www.kensington.com

Mouse in a Box Optical Pro, \$39.99
Mouse in a Box Optical, \$24.99

THE GRAPHIC DETAILS

by Cathy Lu

Why spend hundreds of dollars on a brand-new graphics card when your Mac already ships with a perfectly good one? Because it'll make your games smoother than Billy Dee Williams.

A higher-end 3D graphics card means enhanced graphics capabilities and improved performance in your games. Sound awesome? It is, but before you run out to buy yourself a brand-shiny-new card, there are a few things you need to know.

Better Graphics and Performance

First, to get the enhanced graphics capabilities a 3D card offers, developers need to write games so they take advantage of that card's special features. For example, just because the GeForce3 card (as of press time, the hottest video card on the Mac market) supports high-end features like pixel shading (a technology for making pixel-based effects react in real time to a game's action) doesn't mean that every game running on the GeForce3 will utilize pixel shading. If it's killer graphics effects you want, make sure the games you plan to play support the specific effects that card offers before you upgrade.

But even if a high-end card doesn't make a difference graphically, performance-wise it will. A better 3D card will allow you to play games at a higher resolution and bit depth, as well as a faster frame rate. So

even if Quake III doesn't *look* that much better running on a GeForce3 than on a lower-end card, the gameplay will be faster and smoother, making fragging your enemies that much more enjoyable.

Some Mac owners, sadly, are excluded from the upgrade club. You can't upgrade the 3D graphics acceleration in the iMac, Cube, PowerBook, or iBook because the video chips are soldered to the motherboards. You can, however, upgrade the graphics card in any Mac tower. All current G4s ship with nVidia's 32MB GeForce2 MX card, except the 800MHz Dual G4, which ships with a 64MB nVidia GeForce2 MX TwinView card that supports two monitors: one attached to its digital ADC port and one to its analog VGA port. Every G4 released prior to 2001 (as well as the low-end G4 that came out at the beginning of 2001) shipped with either an ATI Rage 128 or Rage 128 Pro.

AGP versus PCI

In July 2000, Apple started shipping G4s with an AGP 2X expansion slot instead of the older PCI standard. In January 2001, Apple moved to AGP 4X. If that just went in one brain lobe and out another, here's the deal: Graphics cards fit into one of three slots—PCI, AGP 2X, and AGP 4X. PCI is the old standard and moves data at a maximum of 133 MBps. Several years ago, AGP arrived as a high-bandwidth expansion slot solely for

Giant Effects

We sat down with Jim Black, developer relations manager of nVidia, and asked him to show us some of the more interesting graphical effects in MacPlay's *Giants: Citizen Kabuto*. We took the following screenshots of *Giants* on an 800MHz Dual

G4 with a GeForce3 card. Unfortunately, you can't see effects specific to the GeForce3 in these screenshots for two reasons: First, as of press time, according to Black, Mac OS 10.1 did not implement the OpenGL extensions needed to run whiz-bang effects like pixel

shaders, vertex shaders, and full-scene antialiasing. Second, *Giants* will require a patch to take advantage of pixel shaders, vertex shaders, and bump mapping. Still, the game shows off some nice effects. We asked Black to talk about them.



"The smoke emanating from the unfortunate victim of a Ripper attack is an example of a nice particle engine. Particle effects typically include smoke, fog, clouds, mud or sand spray, [and so on]. In the past, individual particles were large and chunky, more like snow than smoke. Thanks to hardware transform and lighting, more-realistic vapors and liquids are now possible."



"Look at the crisp geometry of the distant buildings. Games that don't take advantage of hardware transform and lighting cannot push the same number of polygons and, as a result, distant objects appear very pixelated and low-res."

ON GRAPHICS CARDS

graphics cards. How much faster is AGP than PCI? Quite a bit: AGP 2X moves data between the graphics chip and system memory at a maximum of about 533 MBps and AGP 4X maxes out at approximately 1,066 MBps. What this means for games is that your system can move higher-res graphics more quickly between the graphics chip and your Mac's RAM. Translation: better performance for graphically intensive games.

If you're in the market for a video card, you should note that nVidia's line of GeForce cards only works in AGP slots, and the GeForce3 is only supported in Macs that have AGP 4X (see "Upgrade Options," right). However, if you want to upgrade an older card like the Rage 128 Pro, you can go for the ATI Radeon card, which comes in both PCI and AGP 2X flavors. Also, since nVidia provides chip technology and not actual graphics boards, you need to buy your card from Apple. On that note, the only board that Apple sells separately (as opposed to offering it as part of a whole system) is the GeForce3. Also of note is the fact that ATI is coming out with what it hopes will be its GeForce3 killer, the Radeon 8500 card, at some point in the very near future. So stay tuned for what promises to be a beautiful future for game addicts.

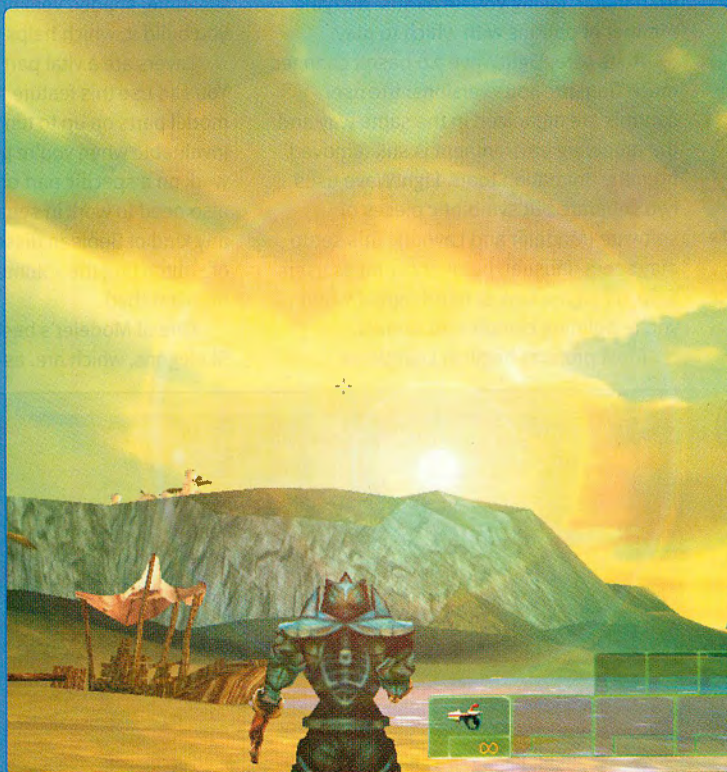
Upgrade Options

CARD	PRICE	SLOT	VRAM	NOTES
ATI Radeon www.ati.com	\$229	AGP 2X or PCI	32MB	The Radeon can't keep up with the higher-end cards, but with both an AGP and a PCI version, it can replace an older graphics card in either PCI or earlier AGP 2X Macs. The PCI version is also great for driving a second monitor.
nVidia GeForce3 (available from Apple) www.apple.com	\$499	AGP 4X	64MB	As of press time, the top-performing GeForce3 supports a number of high-end effects such as vertex shaders and pixel shaders—technologies that allow game developers to apply more-realistic effects to models and pixels.
ATI Radeon 8500 www.ati.com	TBA*	AGP*	TBA*	Not released as of press time, the Radeon 8500 incorporates technologies like pixel shading, vertex shading, and Truform, a way to achieve realistic-looking surfaces that contain more detail and curves (as opposed to the triangular scenery you're accustomed to seeing).

* At press time, ATI would not go into the details of the card.



"[There are] some nice high-polygon models in this scene, including the trees and the character models. Note the detailed silhouette of the player character, devoid of angular vertices. This is the hallmark of a highly tessellated model."



"The flare around the sun is a nice example of an effect that uses the second-generation hardware transform and lighting engine of the GeForce3. High-resolution, 32-bit textures make for a stunning sky. Again, the high-poly models are apparent in the pier. Also note that the lighting affects the appearance of the player character."

reviews

Contents may be habit-forming.

LightWave 3D 7.0

design & graphics

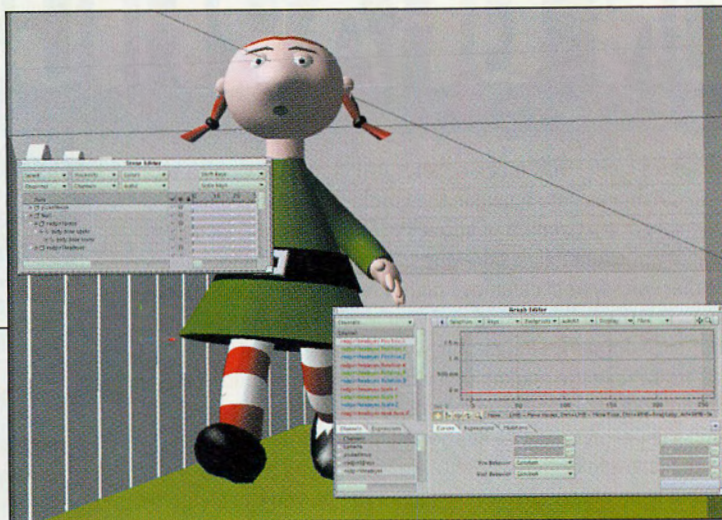
Company: NewTek

Contact: 800-862-7837 or 210-370-8000,

www.newtek.com

Price: \$2,495 (SRP); \$495 upgrade

Requirements: Power Mac (G4 recommended), Mac OS 9 or later (Mac OS X recommended), 384MB RAM for Mac OS 9 or 128MB RAM for Mac OS X, 32MB free hard disk space, 800 by 600 display, CD-ROM drive



Walk this way: LightWave's Graph Editor makes short work of animating big 3D scenes.



FREAKIN' AWESOME!
The most valuable products, the coolest gizmos.



SPIFFY
A solid offering. Overall a good investment.



YEAH, WHATEVER
Neither recommended nor rejected. Some might like this, but we weren't impressed.



BLEEH!
Give us back the time we spent testing this.

LightWave has long been a must-have for many 3D artists, and version 7.0 reaffirms NewTek's position as one of the premier 3D modeling and animation software developers. This version includes many new high-end features, plus subtle enhancements for the professional 3D artist. LightWave 7.0 reinforces the program's already rock-solid foundation, giving you an almost dizzying number of options with which to play.

At its core, LightWave 7.0 hasn't changed much from previous versions: the user controls are organized in the same way and the modeling environment is still removed from the animation tools. LightWave uses two separate but symbiotic pieces of software (Modeler and Layout). This setup may seem unusual, but it encourages users to focus on the task at hand—great when you're building complex 3D scenes.

Most projects begin in LightWave

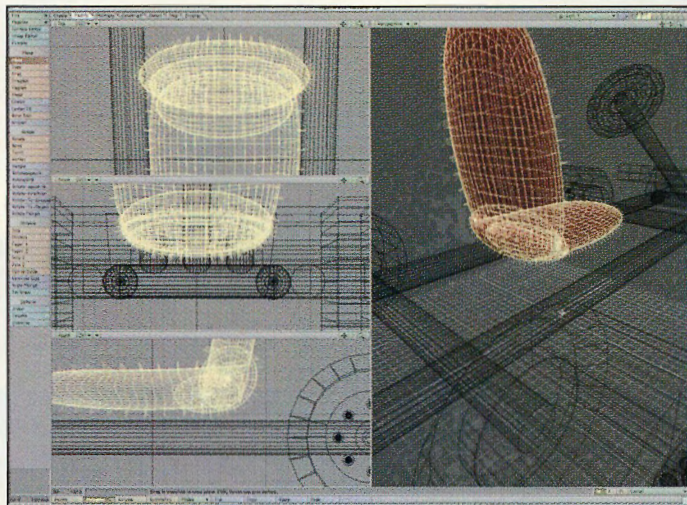
Modeler, where you can create models of all shapes and sizes, from primitives (boxes, spheres, cones, text, and so forth) to highly complex organic shapes. The list of tools in Modeler remains huge. If you want to move, twist, turn, rotate, bend, stretch, color, texture, or even dissect your models, all the tools you need are here. The user interface is clean, customizable, and easy to use. Some of the more advanced modification tools such as taper, vortex, and magnet can be difficult to master, but LightWave displays a real-time, shaded version of your model as you build it, which helps you learn the tools.

Layers are a vital part of model creation. You can use this feature to isolate (and save) model parts on up to ten separate layers—invaluable when you're performing detail work on a specific part of your model. You also need to work in separate layers to do any kind of Boolean dissections (a method of subtracting the volume of one 3D shape from another).

One of Modeler's best tricks is creating Skelegons, which are, as the name implies,

a mix of skeleton bones and polygons. This feature lets you build a skeletal system along with your models, which you can use later to easily create complex model deformations like walking. Before animating Skelegons, you must first convert them to bones (in Layout), but this is a simple procedure.

LightWave Layout is where you put models into action; it's also where most of LightWave's new features reside. Whether you're performing simple motion animations with the rotate and move tools, or more-complex organic movement with bones and deformations, Layout (almost literally) brings your models to life. Layout is also where you apply environmental effects such as smoke, clouds, and fluids (see "Smokin' Effects," p41). Through the use of HyperVoxels (which consist of computed mass—for example, a drop of maple syrup—as opposed to modeled shapes), LightWave creates realistic volumetric effects that are impossible to model with polygons. You can also add forces such as gravity and wind to your effects, making them behave as they would in the real world (or in some other, more surreal world if that's your goal). You



As you create your model, you can view real-time shaded and/or wire-frame results in any combination you require—it's much faster than rendering the scene.

Baby Steps

If you're not ready for such an expensive and potentially overwhelming piece of software, you may want to check out LightWave's light version, Inspire 3D. It offers many LightWave basics for a fraction of the cost (\$495). However, the current version of Inspire 3D is based on a pretty old LightWave engine (version 5.0, circa 1996), so you are missing out on several years' worth of advancements.



When you're finally done with your model or scene, LightWave generates fast, high-quality rendered images.

can even preview them in real time, which means less rendering.

One of the most important Layout tools is the Graph Editor, which lets you map out complex motion paths for models, lights, and cameras in graph form—making the process of animating 3D models and scenes infinitely easier. If you need to create a lovely head of hair, you can use the new Sasquatch Lite. This handy tool makes creating hair, grass, and other wispy what-nots very manageable. Also new to Layout are rendering options (such as the Big Eyes Small Mouth cartoon shader), spline-based deformations, and collision-event features, which help create realistic interaction between the models in your scene. The list of other new and improved Layout features goes on. Rest assured: If it's available anywhere in the 3D animation world (think Maya: see *Reviews*, 12/01, p40), it's probably in LightWave 7.0.

When you're done modeling and animating your scene, LightWave 7.0 provides an impressive list of rendering options, including separate modes for realistic, quick-shaded, and wire-frame renders; ray-traced shadows, reflections, refractions, and transparencies; volumetric lighting; and multiple levels of antialiasing to smooth out rough edges. Rendering times can be remarkably fast depending on the power of your processor, and the quality of rendered output is dependably professional.

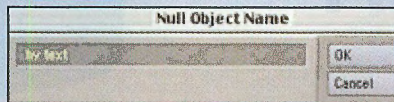
If you currently own LightWave 6.5 and can't decide if you should upgrade, take a hard look at the new features and decide whether they will help you in your specialty areas. If you're new to the world of 3D, LightWave may prove a little scary. Let's face it, there are more features here than you could ever hope to explore completely. But like any other piece of high-quality professional software, LightWave lets you learn as you go, and when you're ready to create complex models, animations, and effects, the software will be ready for you.—Patrick Baggatta

good news: Almost unlimited high-end features. Versatile rendering engine. Professional quality at a prosumer price.
bad news: Big price tag for casual users. Can be overwhelming for beginners.

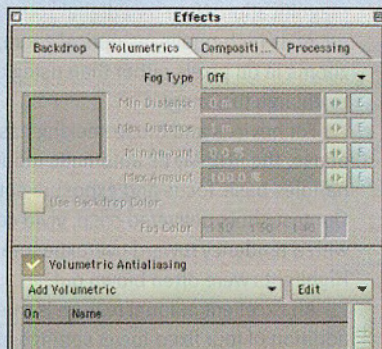


Smokin' Effects

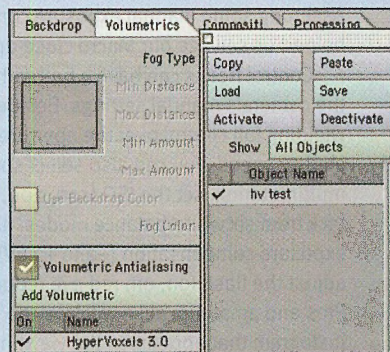
Creating volumetric effects with HyperVoxels is one of LightWave 7.0's many advanced features. In this example, we create a colored smoke effect in LightWave Layout.



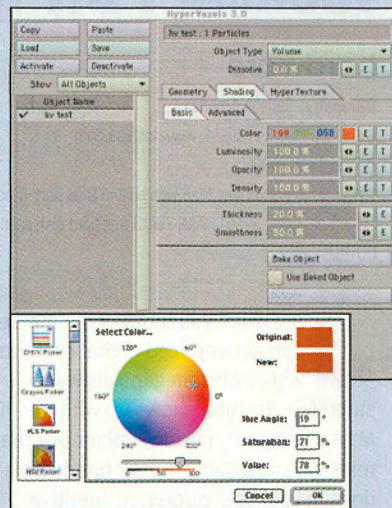
1 Create a null object in an empty scene and name it "hv test." This will be the foundation of your smoke effect.



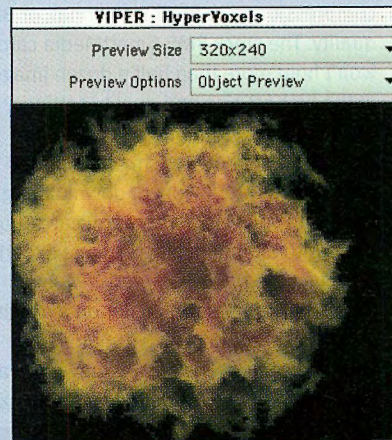
2 Click the Scene tab and click the Volumetrics button under the Effects header to open the Effects window's Volumetrics pane.



3 Click the Add Volumetric button in the Volumetric Effects window and select HyperVoxels. Double-click the HyperVoxels 3.0 listing that appears in the list below Add Volumetric. This opens the HyperVoxels panel.



4 Double-click the name of your null object (hv test). This will activate your HyperVoxel options. Choose Volume from the Object Type menu. Click the Shading tab and change the color to something in the orange family.



5 Click the Viper button in the main LightWave menu to see your smoke effect in real time.



Creating Skelegons in Modeler lays the foundation for complex organic animations.

Toshiba PDR-M71

hardware

Company: Toshiba America

Contact: 888-241-5874, www.toshiba.com

Price: \$499 (SRP)

Requirements: Power Mac with built-in USB port, Mac OS 8.1 or higher, 32MB RAM, 70MB free hard disk space, CD-ROM drive

Just when you thought the market for consumer-priced digital cameras with 3-plus megapixels was saturated, Toshiba shows up with the PDR-M71: a compact, 12-ounce black box that rests as comfortably in your hands as it does in your coat pocket. Its intuitive controls make this an excellent camera for novices, and there's plenty here for experienced digital photographers as well.

The 3.2-megapixel PDR-M71 captures JPEG images at up to 2,048 by 1,536 pixels. You can't save them in the higher-quality TIFF format, but you can set the JPEG compression ratio for Fine, Normal, or Basic quality. The stock 8MB SmartMedia card won't hold more than half a dozen images at the highest size and quality settings, but the camera accommodates cards up to 128MB. Back at the ranch, the included USB cable makes short work of downloading images to your Mac, where you can adjust them with Sierra Imaging's Image Expert (also included).

The PDR-M71 sports a Canon lens with 2.8X optical zoom, which equates to a 35mm to 98mm lens on a 35mm camera. Beyond that is a 2.2X digital zoom for extra

magnification. Note that digital zoom is never as high-quality as optical zoom, as it zooms in on pixels rather than using optics to enlarge the image.

For novices and those seeking ease of use, the PDR-M71's automatic mode handles basic focus and exposure settings. Our test shots delivered crisp, vivid colors with a tendency toward overexposure: Highlights were often blown out.

An excellent manual feature is the addition of four fixed-focus settings in addition to autofocus: Macro, 1-Meter, 3-Meter, and Infinity. The Macro setting does a great job of capturing objects from 3 to 28 inches away, but the camera has a hard time calculating the correct exposure. Asserting some manual exposure control helped us salvage our Macro close-ups.

Control freaks can have a ball with the camera's manual settings. Besides wielding full control over the aperture and shutter speed, you can also select spot or multimetering, set the ISO (100, 200, 400), pick from six white-balance modes, allot for exposure compensation (-2 to +2 EV), and adjust the flash (on, off, red-eye reduction). Pros and amateurs alike will love the histogram that appears in the viewfinder (in manual mode). The histogram is a simple visual interpretation of the exposure

The PDR-M71 is easy on the eye, easy on the pocketbook, and pretty easy to use.

settings that illustrates the overall tonal range of the shot, showing beforehand any impending over- or underexposure—this helped us forgive the camera's penchant for overexposure.

Following the latest trend in consumer digital cameras, the PDR-M71 also captures movie clips at up to 320 by 240 pixels, and sound.

The PDR-M71's most glaring fault is its lack of external flash support (a standard feature on many cameras in its class). This means it's impossible to plug in a strobe for a studio setting or add a flash for event photography, among other things. The built-in flash is sufficient for everyday use, provided you use red-eye reduction when photographing people.

All told, the PDR-M71 is a handy camera with enough goodies to appease most hobbyist shutterbugs, especially those on a \$500 budget. Once you spend some time getting to know its manual controls, this is a solid choice for the casual digital photographer.—Leigh Webber

good news: Intuitive and compact. Good features for the price. Histogram. **bad news:** No external flash option. Only saves files as JPEGs. Flaky autoexposure.



spiffy



PHOTOGRAPH BY W. B. JONES



Color choices include Standard, Vivid, Monochrome, and the Sepia-Tone used here.

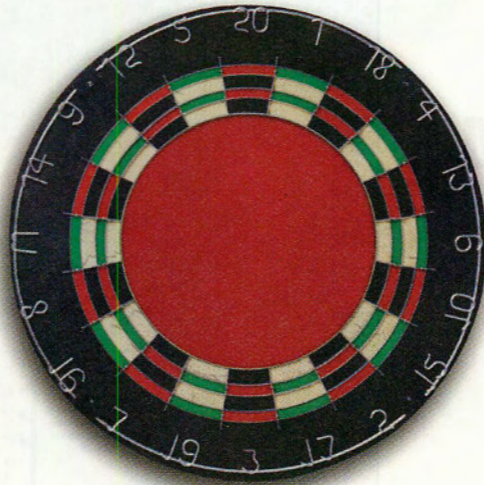


Toshiba's automatic white balance left our still life a bit jaundiced.



The PDR-M71's mackin' Macro mode gets you up close and personal.

PHOTOGRAPH BY LEIGH WEBBER



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Commotion Pro 4.0

multimedia

Company: Pinnacle Systems

Contact: 800-401-0009, www.commotionpro.com

Price: \$995 (SRP)

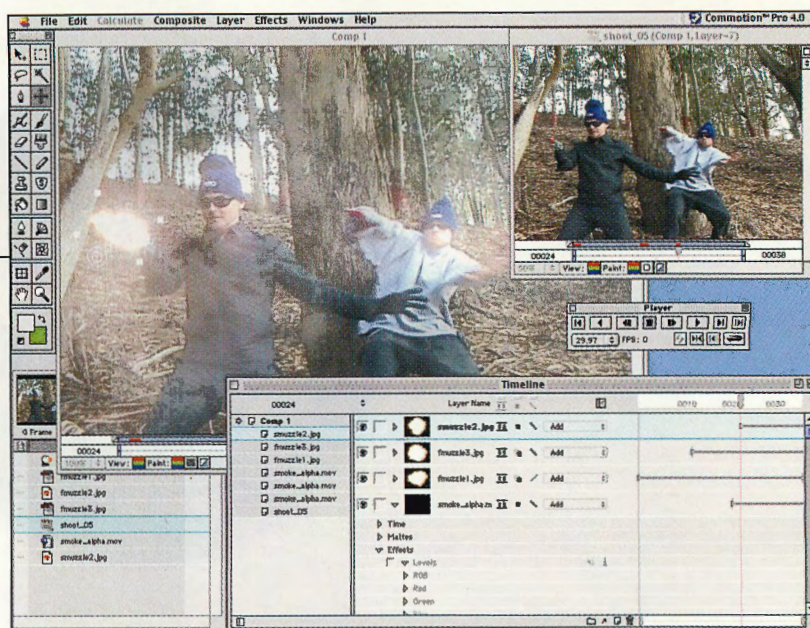
Requirements: Power Mac, Mac OS 8.6–9.x, 128MB RAM (256MB recommended), accelerated graphics card

You may know Commotion's professional painting and rotokeying effects from Hollywood films such as *Star Wars Episode I: The Phantom Menace* and *Driven*. Version 4 brings speed improvements to paint, compositing, and rotokeying operations, as well as some workflow optimizations and enhanced control over parameters. What's lacking is a cool \$1,000 from the (previously \$1,995) price tag. On the downside, version 4.0 has a much smaller manual than previous editions offered.

Commotion's core functionality hasn't changed much. The painting feature, for example, is still an essential part of Commotion, useful for painting traditional, cel animation-style brush strokes and for utilitarian tasks such as wire removal. The paint engine's retooled algorithms provide a 200 percent speed boost. Rotokeying and compositing functions also run more quickly, speeding up Commotion's already fast work environment.

Two welcome additions to Commotion's toolkit are grouping control and the Timeline Browser. With grouping, you can combine several layers into a single group (similar to layer grouping in Photoshop 6) and apply effects (such as tint) or properties (such as scale) en masse. The Timeline Browser is a new minibrowser that resides next to the Timeline, displaying the groups and their nested layers in an easy-to-read list. Double-clicking a folder (group) in the Timeline Browser will show only that group's layers in the timeline, giving you a cleaner working environment. In comps that have a multitude of layers, this enhancement makes for a much more manageable workflow.

Commotion Pro's new trick is time remapping: This effect alters the sense of time in a single pass. Using the Curve Editor, you can accelerate or decelerate the scene and even make the action move backward in time. Creating this effect with Commotion is as easy as dragging points on a curve.



Commotion Pro made our muzzles flash and our guns smoke in next month's staff video.

With all the improvements to an excellent program, not to mention the fact that it no longer requires a hardware key to run, it's sad to see that the documentation has taken a step back (the printed manual has no index, but the PDF version is searchable). The tutorial section is also smaller, but Pinnacle Systems says it will soon post more tutorials online.

What can you say about an already excellent program when it improves—and

drops \$1,000 in price? Even with a less substantial manual and no OS X version (Pinnacle's working on one), Commotion Pro's unmatched abilities make it a *Freakin' Awesome* tool.

—Andrew Tokuda

good news: No more dongle. Half the price of previous version. **bad news:** Quality of manual has taken a nosedive.



When Is Analog Better Than Digital?

Keying is the process of creating a matte around a subject by separating the subject from a uniformly colored background. Commotion's Primatte Keyer samples the background and makes that color transparent, allowing you to place the subject in front of a different, separately shot background. Despite its apparently superior quality compared to analog-video formats, digital video uses a compression codec that wreaks havoc on keying work. The solution? Use a high-quality analog-capture card when importing DV footage to eliminate the effects of DV compression.

Notice the blocky edges? Those are DV compression artifacts—unacceptable for keying work.



We captured this smooth-edged, Motion JPEG-compressed clip via analog.



With the green keyed out, the analog-captured composite is cleaner than DV. This is the reality DV camera owners must accept if they want to end up with good keying work.

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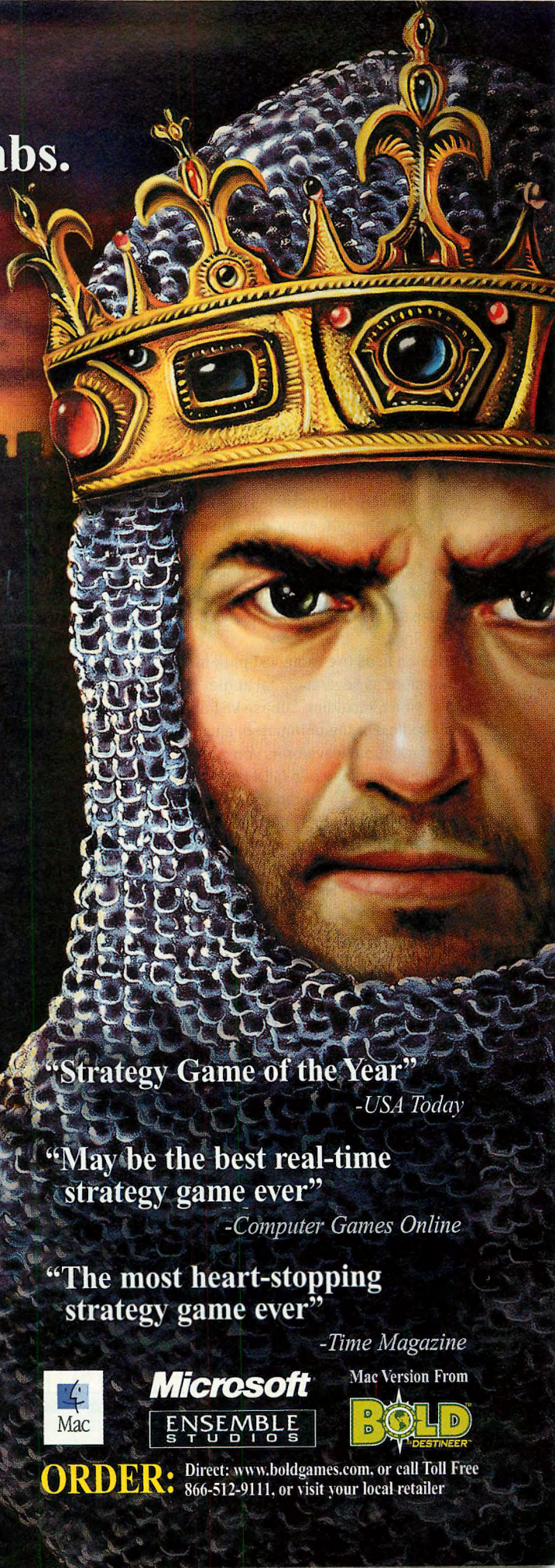
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HALion 1.1

audio

Company: Steinberg

Contact: 818-678-5100, www.us.steinberg.net

Price: \$399 (SRP), \$299 (street)

Requirements: 250MHz Power Mac or faster (G3 recommended), 128MB RAM (512MB recommended), Mac OS 9.x, Cubase VST 5.0, Nuendo 1.5 or other VST-compatible host software

Software that emulates its hardware counterpart, especially music production software, is clearly the wave of the future. Steinberg's HALion fits that model: It's a solid, feature-packed, and versatile software sampler with only a few minor dings.

HALion uses the same VST plug-in architecture as several digital audio applications, including Cubase VST and Logic Audio. For the uninitiated, a sampler plays back audio waveforms you can map out across the range of a MIDI keyboard. HALion supports six stereo channels and three mono-channel VST outputs, so you can, say, apply reverb to the snare drum without affecting the rest of the drum kit.

In Macro mode HALion works (and looks) like a synthesizer. To access the guts of HALion, press one of the six view buttons: Chan/Prog for assigning programs; Keyzone for mapping samples across MIDI keys; Waveloop for editing a sample's start, end, and loop points; Env/Filter for envelopes and



HALion may look like a \$40 Casiotone, but it works like a \$1,500 sampling powerhouse.

filters; Mod/Tune for modulating sounds and tuning; and Options for general settings.

Chan/Prog view is where you assign programs (instruments) to your MIDI channels. We had difficulty loading some files from the four CDs of extra instruments HALion included—the program couldn't find some of the necessary audio files. Loading files via drag and drop (instead of using the Load command) solved that problem.

In Keyzone view, you can map samples intuitively to the MIDI keys. The process involves dragging a sample (characterized as a block with control handles) to the graph, where adjusting the horizontal controls sets the key span—for instance, C3, or middle C, to A#3—and adjusting the vertical length sets the sample's velocity so samples play back differently depending on how hard you press a key on a MIDI keyboard.

The Options view has several functions. One of the most important is memory settings, where you control how HALion uses samples—specifically, how much of a sample it loads into RAM. The rest of the sample plays directly from the hard drive, so you can

load more sounds than is possible with a sampler based only on RAM.

From the Options view, you can also import samples from most commercial sample CDs, including Akai, E-mu, and SoundFont formats. Initially, HALion couldn't import half the samples in our collection. Cubase.net's forums quickly revealed an easy solution: replacing Apple's CD-ROM and DVD 1.4.x driver with an older (1.3.5) version.

Another home remedy solved HALion's curiously slow File functions (Open and Save); saving our test song took up to a minute, even with a minimal song arrangement, but turning off Cubase's autosave feature eased that annoyance.

Bottom line: At \$399 list, HALion costs half what a hardware sampler does. It's more versatile, and it's certainly more convenient. —Andrew Tokuda

good news: Low latency. Good signal routing. Could potentially replace hardware samplers. **bad news:** Slow loading and saving. Minor incompatibility with Apple CD-ROM driver.

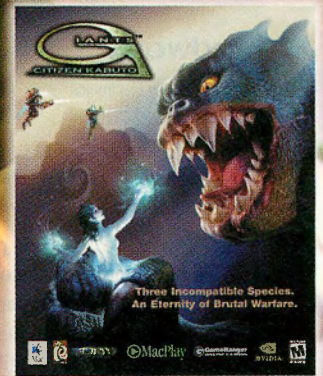


Click, drag, and tweak your sample mapping. It's so easy, even an amateur can figure it out.

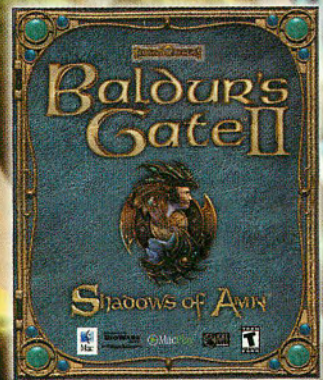


A sampler isn't a sampler if you can't import sounds from commercial sample CDs. With HALion, you can.

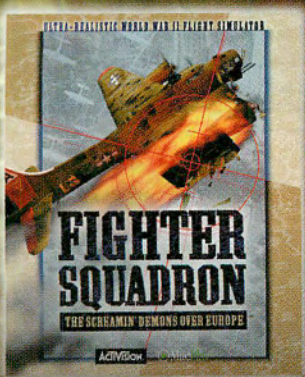
Play Different.



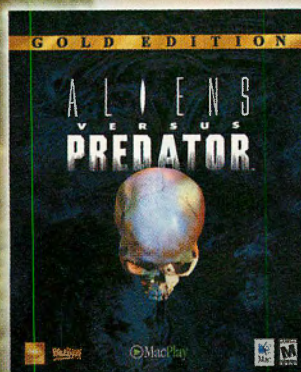
Laugh



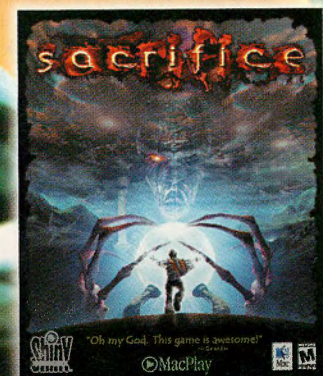
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Mavica CD300

hardware

Company: Sony Electronics

Contact: 800-222-7669

Price: \$999.95 (SRP)

Requirements: 150MHz 604 or faster, Mac OS 7.6.1 or later, CD-ROM drive



Is that a CD burner in your pocket or...oh, never mind.

PHOTOGRAPH BY W. B. JONES

There's no shortage of digital cameras in the consumer marketplace, and thanks to the ubiquity of USB, most even work with our Macs. Still, Sony's CD-burning Mavica CD300 incorporates some innovative technology any Mac gear-head can appreciate.

The Mavica CD300 addresses two significant concerns for the would-be digital-camera owner: the cost of media for capturing and storing digital images, and the hassle of transferring those images to a Mac—not to mention archiving them. The CD300 resolves these issues by capturing images directly to compact disc, via its onboard mini CD recorder. And Sony has accomplished this in a camera that isn't substantially larger or heavier than its competition, though it is a bit pricier.

The Mavica uses 8cm CDs, both CD-R and CD-RW. These discs are inexpensive (generally \$1 and \$4, respectively) and hold approximately 150MB of images; they instantly archive your images and fit handily in most CD trays (the camera comes with an adapter for slot-loading Macs) Sony supplies a driver so Macs can mount and read the Mavica's UDF (Universal Disk Format) standard, and also includes MGI PhotoSuite SE for basic image editing.

In-camera CD burning has its drawbacks: Before using a new disc, you have to initialize it in the camera, but this is a relatively quick and painless process. Also, you must hold the camera still when you're initializing a disk and when you're recording images to it—in practice, this is less inconvenient than it sounds.

As you would expect of a camera with a \$1,000 price tag, the Mavica CD300 is loaded with features, though this is a mixed blessing. While the camera's menus and controls are relatively well organized, the overabundance of settings and information displayed can intimidate even an experienced photographer. Exacerbating this situation is a poorly written manual that jumps back and forth between instructions for Mac and PC users, and is sometimes downright incomprehensible (apparently due to poor Japanese-to-English translation).

The CD300 is by no means a point-and-shoot camera, but once set up, it provides plenty of flexibility for most nonprofessional photographers: a bright, clear, and large 2.5-inch LCD display (there's also an optional optical viewfinder); a 3.3-megapixel CCD; a Zeiss zoom lens; an infrared autofocus mechanism; a variety of exposure modes; the

ability to capture short movies and sound clips; autobracketing of exposures; a choice of either center-weighted or spot metering; and other advanced features. Prosumer gadget geeks, this camera is right up your alley. One limitation the CD300 shares with most digital cameras is that it can't display depth-of-field focusing—so you can't preview how much of the foreground and background are in focus.

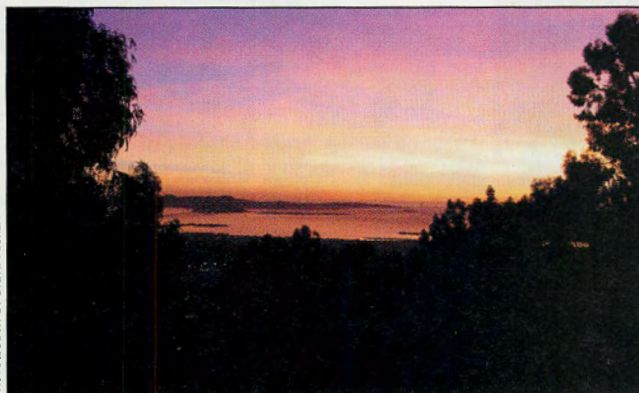
Another limitation plaguing many digital cameras is that they don't capture as much image information as their 35mm counterparts. Translation: Image quality and color fidelity are sometimes suboptimal. In our test shots, the Mavica CD300 provided relatively high-quality, true-color images.

If you can afford to spend close to \$1,000 for a nonprofessional camera, the Mavica CD300 is an excellent choice: It produces high-quality pictures, and using CDs as film (instant archives!) saves both time and money.—Steve Becker

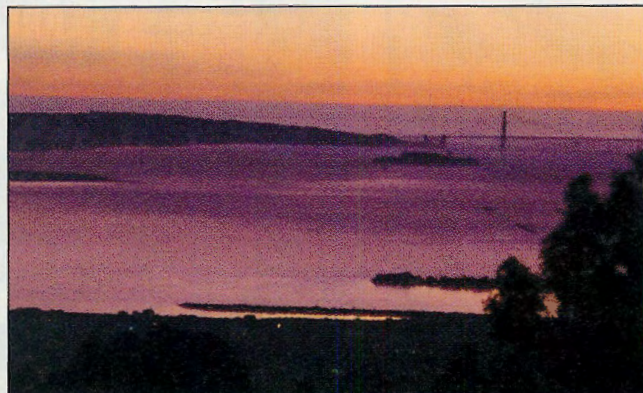
good news: CD-as-film is convenient and cheaper than other media. Full featured. Good picture quality. **bad news:** Expensive. Poor documentation.



PHOTOGRAPH BY STEVE BECKER



Ignoring the Mavica's multitudinous controls, we snapped this awesome sunset in wide-angle, autoexposure mode.



Even at maximum zoom, the Mavica fares well compared to other 3.3-megapixel digital cameras.

Epson Stylus C80



PHOTOGRAPH BY W. B. JONES

hardware

Company: Epson

Contact: 800-873-7766, www.epson.com

Price: \$179 (SRP)

Requirements: G3 or faster Mac, Mac OS 8.5.1–9.2, 32MB RAM, 100MB free hard disk space, USB port, CD-ROM drive

There's no point in crying over spilt milk—especially if you printed your document on an Epson Stylus C80. Loaded with DuraBrite waterproof pigment ink, the C80 claims to put an end to the smear campaign that inevitably starts the minute you get an inkjet print wet. But are waterproof inks worth the expense when other comparable Epson printers are priced well below the C80's \$179? We say yes, but with reservations.

The C80 is a capable, all-purpose printer that pumps out good-quality prints—even on plain paper. In addition to its waterproof ink, the C80 also features four individual ink cartridges (no more tossing out half-used four-color cartridges), 2,880-by-720-dpi resolution, fast print speeds, and whisper-quiet operation.

Epson doesn't provide the necessary

The C80's prints can take a licking and keep your tongue from turning black.

USB cable or any bundled software, but the included driver offers a few controls for setting the included color profiles with ColorSync, making manual color adjustments, smoothing edges, and completely altering a photo's coloring (making colors more vivid, sepia toned, or black and white, among other options). However, Epson's profile for its Premium Semi-Gloss Photo Paper is a little off—this caused a slight magenta color cast in our prints, including a photo printed only with black ink (possibly due to a reaction between the ink and paper).

Color illustrations and graphics print nicely, displaying good tonal range, no dithering, and undetectable ink droplets when printed at the maximum 2,880-dpi setting on Epson premium paper. Text also prints cleanly and incredibly fast (12 pages in 1 minute and 42 seconds), though on closer inspection we noticed some rough edges.

Photo quality is a mixed bag. Images printed on Epson's premium papers are somewhat dark with noticeable color shifts; strangely, our plain-paper prints displayed more-accurate colors and good tonal range. Though prints display clean and clear detail in well-lit areas of an image, all detail disappears in the shadows. Print times were also quick—an 8-by-10-inch high-res photo printed on Premium Semi-Gloss Photo Paper in 6 minutes and 19 seconds.

While the C80 isn't the best printer for its price, its waterproof inks, high-resolution print quality, and speed give it just enough oomph to snag a *Spiffy* rating.—*Kris Fong*

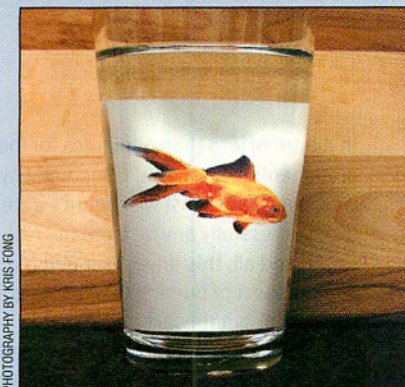
good news: Waterproof inks. Good print quality. Accurate color in plain-paper prints. Fast. **bad news:** Weak shadow detail. Color inaccuracies in prints on premium photo paper. Pricey.



Water Torture

We've had bad experiences with waterproof products—our so-called waterproof watch resembles a half-filled

snowglobe. So we thought we'd test the waterproofness of Epson's DuraBrite inks with our own thoroughly *unscientific* method.



PHOTOGRAPH BY KRIS FONG

We let our goldfish (printed on Epson Premium Semi-Gloss Photo Paper) swim around in a glass of water for a couple of hours. Though he still won't eat, he certainly shows no signs of withering away.



Return to sender? Not even. Our address (printed on a plain-paper envelope) took a 5-minute shower and didn't wash down the drain, assuring us that the USPS can still deliver our letter through rain, sleet, and snow—even a torrential downpour.



We tipped our glass on two identical photos—one printed on the C80 (top) and one from an Epson Stylus Photo 870 (bottom). Both inks held fast, but our messy spill drowned an HP DeskWriter document, which bled profusely.

iShock II

hardware

Company: Macally

Contact: 626-338-8787, www.macally.com

Price: \$39 (SRP)

Requirements: Power Mac, USB port, Mac OS 8.6 or later

Thanks to the ubiquity of USB, it's easy to find a console-style gamepad that works on a Mac. That means in those innumerable hours you spend playing games, you can enjoy finer control and quicker response, and do less hunching over a keyboard.

Unlike other pads, the iShock II utilizes Force Feedback, which ostensibly makes games more engaging; two motors in the handles rotate and shake the controller when your spaceship collides with an asteroid or when you receive a particularly mighty knock in the chops.

You can configure iShock's plentiful

buttons and directional pads for any game—even activating the feedback motors manually—via the iShock Manager Control Panel, but true Force Feedback depends on the willingness of game developers to create custom drivers. Not many Mac games provide Force Feedback—those that do include Pangea's Cro-Mag Rally, Ambrosia's Aperion and Ferazel's Wand, and Tony Hawk's Pro Skater 2 from Aspyr. And what about Force Feedback in Mac OS X games? As of this writing, the iShock doesn't work at all in OS X.

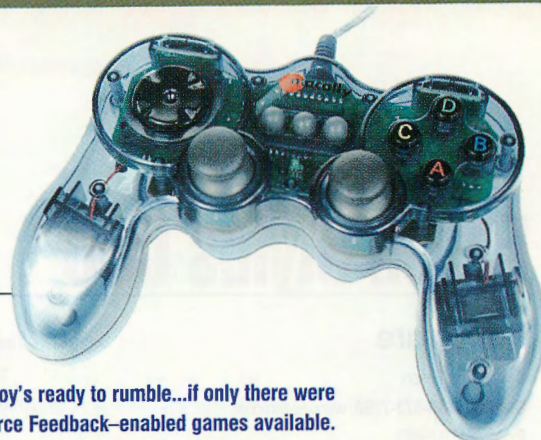
In action, the iShock is responsive and the buttons are positioned appropriately for our adult-size hands—so those with kid-size hands may find it unwieldy. We would have appreciated a little more texture on the

directional pad, since our thumbs can get sweaty and slip off when we're under enemy fire.

Ultimately, iShock's success depends on how well developers implement the Force Feedback features, since it's the first Mac-friendly controller to lay claim to them. In all other aspects, the iShock is a worthy addition to a gamer's repertoire—but not remarkable enough to displace your favorite gamepad unless you're hell-bent on rumbling.—Paul Yoon

good news: Solid design. Force Feedback. Versatile.

bad news: Limited applications. Chunky for small hands.



This bad boy's ready to rumble...if only there were more Force Feedback-enabled games available.

PHOTOGRAPH BY W. B. JONES

Yamaha CRW2200FXZ

hardware

Company: Yamaha

Contact: 888-926-2426, www.yamaha.com

Price: \$300 (street)

Requirements: Mac OS 8.6 or later, FireWire port

Once again, Yamaha pushes the limits of CD burning as the first to break the 20X burn speed barrier. Yamaha claims the CRW2200FXZ burns at 20X (10X rewrite), and tops out at 40X when reading data and ripping audio CDs. As they say in Detroit, your mileage may vary—ours did, in a bad way.

The CRW2200series comes with NeroMax CD-mastering software by Ahead Software. Promptly toss this program out the window. Buy a copy of Roxio's Toast (www.roxio.com) and install that instead. Why? For starters, NeroMax is very finicky in that you must optimize your drive with

We wouldn't mind the plain-Jane looks if Yamaha had bothered to dress up this drive with decent software.

Norton Utilities' Speed Disc before burning cross-platform data CDs. We optimized, and it still took nearly 12 minutes to burn a full (650MB) data CD, and 7 minutes to dupe 45 airy minutes of Enya. At the drive's claimed speeds, those times would be more like 4 minutes and under 2 minutes, respectively. One thing NeroMax can't foil is Yamaha's Optimum Write Speed Control and industry-leading 8MB buffer memory—we didn't lose a single disc to buffer underrun, even when we inadvertently used a disc rated for 16X burning.

That said, the Yamaha runs fairly well using Toast. Granted, we only reached 16X burn-speed for data CDs, but that resulted

in a burn of less than 6 minutes for the aforementioned 650MB CD-R. And Enya—well, even with Toast we couldn't write her disc successfully any faster than 12X.

All and all, this drive disappointed us. The prospect of burning CDs at 20X got us excited, but the fact that Yamaha doesn't live up to its speed claims and expects us to use second-rate software leaves us feeling burned.

—Leigh Webber

good news: Impressive specs. No-nonsense design.

bad news: Sucky software. 20X speed is wishful thinking.



PHOTOGRAPH BY W. B. JONES

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DynaMO 1300FE

hardware

Company: Fujitsu Computer Products

Contact: 800-626-4686 or 408-432-6333,

www.fcpa.com

Price: \$399, \$20 per 1.3GB GigaMO disk (in sets of five)

Requirements: Power Mac G3 or faster, Mac OS 8.5.1 or later, FireWire 2.0 or later, FireWire port

Magneto-optical (MO) storage devices have been around for years. Over that time, MO devices have won praise for their respectable transfer rates and extremely durable media. But unfortunately, they've always commanded a high price, leaving it to other, less-impressive technologies to fill the gap.

With the DynaMO 1300FE, Fujitsu finally licks that problem. At \$399, the drive actually costs less than a Jaz drive with a FireWire adapter. The media are substantially cheaper—for the cost of a single 2GB Jaz

The DynaMO won't win any speed races, but it'll keep your data safe for the long haul.

disk, you can buy a five-pack of 1.3GB GigaMO cartridges—and MO combines the best of magnetic (think hard disk) and optical (think CD) technologies for unmatched longevity and data security.

The device itself is designed simply and well. Disks slide in and out smoothly and mount promptly in the Finder. Using the DynaMO in Mac OS X is a pleasure—you don't even need a driver, as the device is fully compliant with the FireWire standard.

Fujitsu claims a peak transfer rate of 5 MBps. In our testing, the sustained rate wasn't even close to that, but the DynaMO isn't built for speed—it's an archival device. Dust, magnets, and liquid spills (assuming

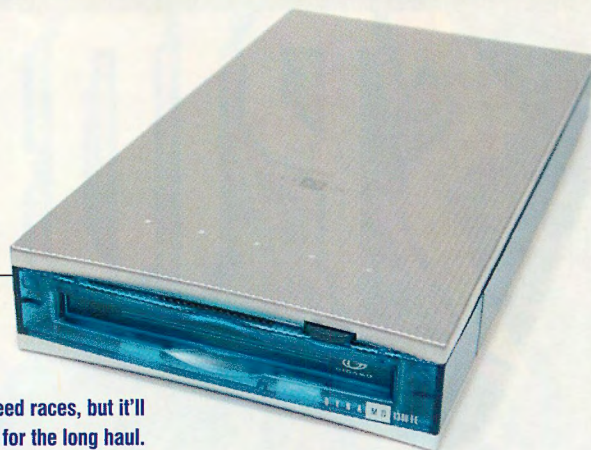
you dry the disk before using it!) simply can't affect the ability of a DynaMO disk to retain data.

With the DynaMO, MO devices are finally becoming competitive with magnetic media (Zip, Jaz, and so on) in price and capacity. We're hoping to see the trend continue—we've had enough of tetchy archival media (DOA CD-R discs, unspooling tapes, and clicks of death) to last us a lifetime.—*Ian Sammis*

good news: Simple, well-implemented device. Extremely durable media.
bad news: Somewhat pricey.



PHOTOGRAPH BY W. B. JONES



Philips Brilliance 180P

hardware

Company: Philips Consumer Electronics

Contact: 800-835-3506, www.philipsusa.com

Price: \$1,199 (SRP)

Requirements: Any Mac with a VGA or DVI port

Big-screen LCD: You know you want it. The Philips 180P, an 18.1-inch LCD display, has a lot going for it. Imagewise, it's sharp with very good contrast, brightness, and color saturation; its sturdy base supports a compact tilt-and-swivel stand (or you can wall-mount it for a zero footprint), built-in microphone, and mini stereo speakers; and its street price is among the lowest for any 18.1-inch LCD. Unfortunately, some significant shortfalls counter these benefits.

Most significantly, the monitor's Digital Video Interface (DVI) connection, which is DVI-D, doesn't work properly with ATI cards

This baby fits right in with your digital lifestyle, provided you have the correct flavor of DVI.

using the slightly different DVI-I standard—the 180P's preferred 1,280 by 1,024 resolution isn't available, and the quality of visual display suffers noticeably. However, this is a nonissue unless you really *need* a digital connection. Our DVI-D Rage 128 Pro drove the display perfectly, as did a DVI-I GeForce 2 (DVI-to-ADC connector required; \$47.99 at www.belkin.com). The display's VGA connection worked flawlessly with every current video card we could find.

The onscreen display is reasonably comprehensive and easy to use thanks to its straightforward menu and controls, but we'd have gotten more out of it if the accompanying documentation weren't

completely PC-centric. Likewise, several calls to Philip's tech support (concerning the ATI glitch) didn't lead us to a single individual who had a clue about supporting Macs.

The 180P has a great bang-to-buck ratio, especially if you have the right video card and/or can settle for a nondigital (VGA) connection. Hopefully, Philips will improve its Mac support and resolve the ATI DVI-I issue—if so, the 180P will be a great buy.—*Steve Becker*

good news: Very good image, controls, and price.
bad news: Digital connection doesn't work correctly with some video cards.



PHOTOGRAPH BY W. B. JONES



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Aliens versus Predator Gold Edition

fun & games

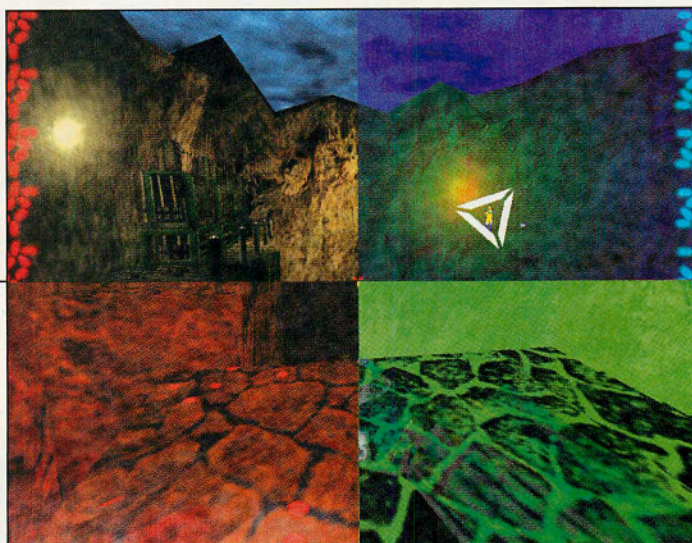
Company: MacPlay

Contact: 214-855-5955, www.macplay.com

Price: \$29.95 SRP

Requirements: 233MHz Power Mac G3 or faster, Mac OS 8.6 or later, 64MB RAM, 350MB hard disk space, CD-ROM drive, OpenGL-compatible 3D acceleration

The Predator's four view modes highlight different terrain features—and enemies.



Video games based on movies usually suck, but we don't often complain because most never make it to the Mac anyway. *Aliens versus Predator Gold Edition* not only breaks this trend, but manages to be one of the best first-person shooters available on this or any platform. That's right, kiddies—this one's right up there with *Marathon*.

The game is set in a xeno-research facility run by the infamous Weyland-Yutomi corporation. Humans have been conducting experiments on captured Aliens and Predators; unsurprisingly, the Aliens escape to sabotage the humans. Against this backdrop, you assume one of three roles: an Alien following the Queen's orders to assault the humans, a Predator out to rescue his captured comrade, or a human Marine just trying to survive.

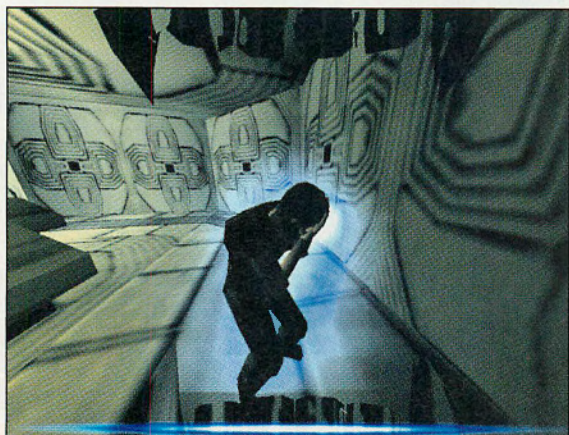
Each race plays so differently that *Aliens versus Predator* is really like three games in one. The Alien sports only three weapons—claws, tail, and teeth—but his gut-twisting speed and ability to climb walls make him a more than worthy foe. The Predator is self-reliant, armed to the hooked teeth with self-

powered weapons, a medical computer, and a cloaking device that renders him invisible to humans. The Marine plays like a standard FPS hero—grabbing ammo, weapons, and health wherever he finds it—and remains very much the underdog although he totes the biggest guns. Finishing each race's five solo missions unlocks two to five bonus missions, depending on the level of difficulty completed.

The game may be a work of fiction, but it's amazingly realistic. Rather than pumping shot after shot into demons that just won't die, you can take down a foe with a short burst of gunfire or a single shot from the Predator's spear gun. Many of the game's sounds come directly from the movie, and the cramped levels perfectly capture its dark, uneasy atmosphere. The partially deformable terrain acquires scars from weapons fire. The fanatically detailed textures become discolored with blood splatters. Shooting out dynamic light sources plunges the claustrophobic hallways into terrifying darkness. This is virtual reality at its finest.

Since the game has been available on Windows for a few years, a wealth of mods—add-on sounds, skins, and levels—already exists on the Internet, and using them couldn't be easier. Just drop them in the folder labeled "Put new data here" and the game automatically installs them.

In a dark, spooky cavern, the Alien moves in for a lethal head bite.



Up to eight players can compete in a network game, over the Internet via GameRanger or over a LAN via TCP/IP. Foolhardy players can also brave a network level as a lone Marine or Predator against a horde of Aliens.

Make no mistake, this game *will* scare the crap out of you, and parents of impressionable youngsters should definitely take the demo for a test drive (on The Disc, 12/01). The rest of you—put down this magazine and go buy the game. Now.—*Rich Pizor*

good news: Addictive. Easily expandable. Incredibly detailed. Gentle system requirements. **bad news:** Addictive. May be too gory for some. Alien can induce motion sickness.



Deathmatch Dilemma

Each species is different—to survive an interracial deathmatch, you have to pay close attention to your race's specific skills and advantages.

Alien You can go places the others can't. Stick to the rafters and jump down for quick kills. Remember that you regain health by biting off opponents' heads.

Predator Your weapons kill quickly and you can zoom your vision at any time. This species was made for camping and sniping. Just remember that the Alien can spot you even when you're cloaked.

Marine You're only as tough as the weapons you pick up. Move constantly, lead your target, and above all, remember to fire in short, controlled bursts.

X73 Multifunction Printer



PHOTOGRAPH BY W. B. JONES

hardware

Company: Lexmark

Contact: 888-539-6275, www.lexmark.com

Price: \$149.99 (SRP)

Requirements: Power Mac, Mac OS 8.6–9.x, USB port

Lexmark's X73: poster child for the old adage "You get what you pay for."

In theory, the Lexmark X73 is an attractive device: a scanner, fax, copier, and printer, rolled into one \$149 unit. But it has enough shortcomings and problems so you'd be about as well off with a \$75 inkjet printer, a \$75 scanner, and the free software that comes with both.

The X73 is beholden to its driver software and the included X73 Scan & Copy application, meaning you can't use it without turning your Mac on. No biggie, but the X73's required driver (X73 Monitor) caused one of our test Macs to crash repeatedly. (We used Mac OS 9.1 for our testing; Mac OS X drivers should be available now.)

The X73 fared better when we hooked it up to a 600MHz iMac, printing a three-page color document in less than 2 minutes. Once we got the copy function to behave, the device spit out a single medium-quality black-and-white photocopy in 4 minutes.

The X73 boasts 600-by-1,200-dpi scanning and print resolutions up to 1,200 by 2,400 dpi. But even at the highest-quality setting, color-copy output was muddy and lacked detail. Typical color correspondence and printed photos look good, however, especially considering that they're coming out of a \$150 multifunction device.

For faxing, the X73 simply scans a document and feeds it to the Mac's FaxSTF application, which is fine for light-volume faxing. In fact, that's the verdict for the X73 as a whole—if you want an adequate color inkjet printer that includes a flatbed scanner and can make the occasional copy or fax, then the X73 is a low-cost option. Anyone with an extra 50 bucks to spend should look elsewhere.

—Todd Stauffer

good news: Low price. Flatbed scanner top. **bad news:** Buggy software. Slow.



Visor Pro

hardware

Company: Handspring

Contact: 888-565-9393 or 650-230-5000,

www.handspring.com

Price: \$299 (SRP)

Requirements: PowerPC, Mac OS 8.5 or later, USB port, 36MB free hard disk space, CD-ROM drive

The Visor Pro looks just like its kin, but it's got twice the capacity.



PHOTOGRAPH BY W. B. JONES

It's not always wise to mess with a good thing, as Handspring demonstrated with the awkward Visor Edge (*Reviews*, 12/01, p48)—a black sheep if ever one carried the Visor name.

This time, Handspring uses the traditional Visor casing (SpringBoard expansion slot included) and tweaks its inner beauty by doubling the standard 8MB of memory to a hefty 16MB. That'll hold a lot of games and still leave room for your productivity apps and documents; also new is a rechargeable (Lilon) battery.

Rechargeability is a good thing, but the Visor Pro uses the same lame setup that plagues other rechargeable handhelds: Instead of plugging directly into the device, the charger plugs into the HotSync cradle, so recharging on the road requires that you bring along the none-too-dainty cradle in addition to the power supply. At least this rigmarole doesn't require an active USB connection, so you can cradle up and recharge without having to stay tethered to a Mac.

We can forgive the cradle dependence because one charge fueled three weeks' worth of extreme-commuter solitaire (257 games—or 20-plus hours, if you're counting). Less easy to forgive is the lack of included software beyond the

bare essentials (Palm Desktop 2.6.1 and HotSync Manager 3.1).

If you're bent on having a color screen, the Pro's 16-level grayscale won't cut it, but if you consider yourself a Palm OS power user who needs the most memory available in a snappy \$300 rechargeable handheld, grab a Visor Pro.

—Niko Coucouvanis

good news: Rechargeable battery. 16MB RAM. **bad news:** Cradle-dependent recharger. Stingy software kit.



QueFire CD-RW

hardware

Company: QPS

Contact: 800-559-4777 or 714-692-3588,

www.qps-inc.com

Price: \$279 (SRP)

Requirements: 350MHz G3 or faster, Mac OS 9.x or later, FireWire port, 128MB RAM, 100MB free hard disk space

All peripherals should have packaging like the QueFire CD-RW drive's. QPS has brilliantly eschewed traditional polystyrene in favor of a very nontraditional, yet very useful leatheresque carrying case, complete with storage for the included necessities (an AC adapter, a FireWire cable, and even a couple of blank CD media—one RW and one plain old R), which in our opinion is even better than getting batteries with a Game Boy.

The powerful Toast Lite software included with the drive makes backing up

Rugged good looks and speed to burn—would you believe there's such a thing as *too much* speed?

CDs, archiving data, and even making audio remix CDs brain-dead simple. You can drag and drop audio tracks from another CD (placed, of course, in your internal drive), or better yet, drag over MP3 files from iTunes or any other music management software. It's simple, automatic, and intuitive.

With burn speeds of 24X (CD-R) and 10X (CD-RW), the QueFire can be too fast for its own good. Despite the roomy 2MB buffer cache, the dreaded buffer-underrun error is a threat when you're burning CD-Rs at top speed; you'll ruin a disk before it finishes writing if your Mac can't spew data as fast as the CD wants to receive it. Just make sure you read the disk label before beginning and adjust Toast's burn speed if necessary.

The QueFire's functionality is excellent, but its ergonomic form deserves a special mention. Although you can't stand the drive on its side, it sits perfectly atop a G3 or G4 with the CD tray just clearing the handle.

Another bonus: It's color coded to look like G4 equipment.

This iteration of the QueFire is perfect for consumers or professionals who need a fast, versatile, and portable drive.

—Frank O'Connor

good news: Fully portable. Stunning ergonomics. Simple, intuitive software burns multiple formats.
bad news: 24X top burn speed limited by media and file size.



PHOTOGRAPH COURTESY OF QPS



QueM3 UltraSlim 80GB FireWire Hard Drive

hardware

Company: QPS

Contact: 800-559-4777 or 714-692-3588,

www.qps-inc.com

Price: \$399.99 (SRP), \$369.99 (street)

Requirements: G3 or faster, Mac OS 9 or later, FireWire port, 64MB RAM, 100MB free hard disk space, CD-ROM drive

Like its CD-burning QueFire cousin, the QueM3 UltraSlim 80GB FireWire Hard Drive packs state-of-the-art innards into a svelte casing that complements Apple's Graphite-era hardware. The M3 also includes QPS's customary faux-leather pouch and an appropriate field kit: an AC power adapter, two FireWire cables (six pin to six pin and four pin to six pin), and a driver-software CD.

Who needs a fan? The QueM3 is whisper quiet, freakin' fast, and tolerably toasty to the touch.

The drive itself is an 80GB mechanism spinning at a speedy 7,200 rpm—just the ticket for disk-intensive AV work. What better test for an AV hard drive than a fat DV stream? We tethered the M3 to a 500MHz iBook, and it streamed our QuickTime DV file at full size (720 by 480) with no dropped frames or audio stutter.

In action, the M3 is barely audible and runs like a champ, duplicating an 866MB file roughly twice as fast as the iBook's internal drive (94 seconds versus 3 minutes). If you want screaming-fast performance, buy several M3 drives and create a striped RAID (Redundant Array of Independent Disks) with the included

CharisMac software—the M3's casing is designed for stacking.

We dig the M3, but its accoutrements are weak: The AC power supply is the bulkiest we've seen in years, and the included FireWire cables are a skimpy 3 feet long. Worst of all, it arrived formatted for DOS, requiring that we reformat the drive before using it. These drawbacks aside, the M3 offers solid performance and good looks.

—Niko Coucouvanis

good news: Sleek and sexy design. Quiet. Way portable.
bad news: Arrives DOS formatted. Pricey. Cheapo, bulky cables.



PHOTOGRAPH BY W. B. JONES



DiskWarrior 2.1

utilities

Company: Alsoft

Contact: 800-257-6381, www.alfsoft.com

Price: \$69.99 (SRP), \$29.95 upgrade

Requirements: 68020 processor or faster, Mac OS 7.1 or later, 16MB RAM, CD-ROM drive

It's 11 o'clock—do you know where your disk directory is? Sure, it's right on the drive where it's supposed to be, but without a solid disk-hygiene regimen, it could be on its way down the toilet. DiskWarrior 2.1 is as solid as disk utilities come, isolating and repairing directory damage, and even preventing minor disk problems from festering into major data-corruption disasters.

Since we last visited DiskWarrior (version 1.0.2; *Reviews*, Apr/99, p49), Alsoft has added a number of useful features. Version 2.1 includes a more-detailed

DiskWarrior's no-nonsense interface lets you easily select any mounted drive and get medieval on it—as long as it's not your startup disk.

damage reporting system, so you can thoroughly preview repairs before committing to them. And the new DiskShield extension protects your disk from corruption caused by errant applications improperly writing information to the directory. DiskShield also makes sure the System Folder is “blessed” (bootable), and it checks system and Finder files—even wrapper volume system files—for damage.

And yes, DiskWarrior can repair and rebuild Mac OS X disks, with the caveat that the disk in question must be pure OS X: DiskWarrior can't fix disks housing both Mac OS X and Classic installations. We only wish that DiskWarrior could fix the active startup drive, instead of requiring that



we boot off the DiskWarrior CD or another hard drive.

Though other programs such as Norton Utilities and TechTool Pro do an adequate job, DiskWarrior is among the most thorough and robust tools for repairing the disk directory. Its diagnostic and repair abilities are almost scary, in that good, magical way.—Steve Becker

good news: Thorough disk repair. Effective directory protection.
bad news: Inconvenient CD-booting required. A bit pricey.



Stuffit Deluxe 6.5

utilities

Company: Aladdin Systems

Contact: 831-761-6200, www.aladdinsys.com

Price: \$79.95 (SRP), \$19.95 (upgrade)

Requirements: Power Mac, Mac OS 8.6 or later, 6MB of RAM, 30MB of free hard disk space

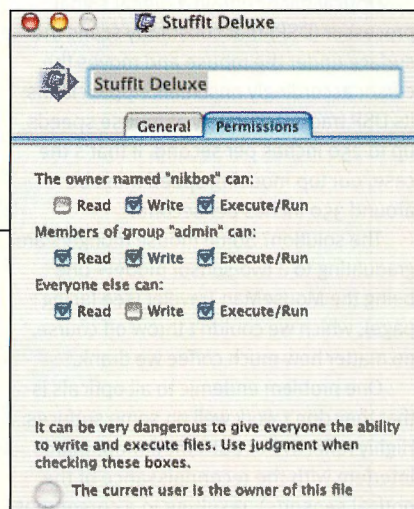
If you haven't heard of Stuffit, this probably isn't your magazine. Aladdin Systems' venerable file-compression and decompression utility has been a staple of the Mac OS for years. Some incarnation of Stuffit has come preinstalled on every Mac since the Classic era (circa 1990). Now Stuffit Deluxe 6.5 (Magic Menu included) works in Mac OS X.

Stuffit is more versatile and savvy to file formats than ever: It compresses and decompresses Palm OS PRC files, Unix TARballs, and ZIPs, and even creates (but still can't open/extract) self-extracting Windows EXE files. Unix hippies might laugh

There's more to Stuffit Deluxe 6.5 than just a pretty, Aquafied icon—it's the ticket to multiple Get Info windows in OS X.

at you for not compressing files in OS X the old-fashioned way (command-line voodoo in a Terminal window), but you'll have the last laugh when you show them Stuffit's Get More Info, an option in Magic Menu (Stuffit's shortcut icon in the Finder menu) that fixes Mac OS X's limitation of only one Get Info window. That's right, Stuffit can open multiple Get Info windows simultaneously.

What makes this update from version 6 more than a bug fix is another little widget called Stuffit Express PE: a utility you can use to create custom “drop-box” apps. Just drag and drop files on these boxes to stuff and transmit the items via your email or FTP program. It's essentially the same as



recording your actions into a drag-and-drop AppleScript applet, only it's more idiot proof.

If you use Stuffit a lot—and especially if you also use Mac OS X—version 6.5 is a worthy upgrade. Otherwise, you can stick with version 6 until a more earth-shaking update comes along to take its place.—Niko Coucouvanis

good news: Get More Info rocks. Magic Menu works with OS X.
bad news: Unix hippies will call you a wuss.



Optical Mini Mouse Roundup

hardware

We could go on for days about how Apple's Pro Mouse sucks. Instead, we've rounded up some alternatives, each with sufficiently long tails (er, cords), more than one button, and improved speed-adjustment software that helps prevent the cursed stuttering-cursor effect we've experienced when moving optical mice—especially the Pro Mouse—too quickly. One warning: none of these mice comes with software in the box, but you can get the software online for free (see the manufacturers' respective Web sites). Though the above-mentioned *mouse on crack* syndrome isn't entirely software dependent, the more-precise speed and acceleration control provided by software definitely helps.

Optical mice contain a digital signal processor (DSP) that constantly scans the surface under the mouse and moves the cursor accordingly onscreen. Apple claims its DSP tracks accurately at mouse speeds up to 250 inches per second. If that's the case, our top mousing speed must be around 350 inches per second.

The solution? Some mouse mongers are graduating to a two-sensor model—one being the MouseMan Traveler (see facing page), which we couldn't throw off course, no matter how much coffee we drank.

One problem endemic to all opticals is that they don't work well on some surfaces: Highly reflective or patterned mousepads interfere with the reconnaissance of the optical sensor(s), resulting in a cursor that doesn't seem to know which way is up.

OS X pectations

All four of these mice work in OS X, but only the Kensington provides OS X software for programming buttons and adjusting tracking speed. The other three use OS X's System Preferences, which relegates their extra button(s) to Control-clicks (bringing up contextual menus). They still track better than Apple's mouse.



Kensington's MouseWorks software makes the PocketMouse purr.

PocketMouse

Company: Kensington

Contact: 800-235-6708, www.kensington.com

Price: \$29.99 (SRP)

Requirements: Any Macintosh, Mac OS 8.1 or later, USB port

Kensington's PocketMouse has an unfair advantage over other mice: the company's tried-and-true MouseWorks software, which provides unparalleled mouse control via fine-tuning cursor speed and acceleration. MouseWorks treats scroll-wheel clicks and chording (clicking both main buttons simultaneously) as regular buttons, for a net of four programmable buttons. On the downside, we found the wheel click too sensitive—we often pressed it accidentally when scrolling.

The PocketMouse nestled perfectly between our thumb and ring finger, while our index and middle fingers rested on the amply sized buttons. Our only beef with the graphite shell is that only the bottom trim is translucent (just barely), so you can't see the cool red glow during normal use.

Thanks to MouseWorks, the PocketMouse is the best tracker in the single-sensor crowd. With the right speed and acceleration settings, it rivals dual-sensor mice. There's even a MouseWorks OS X beta—a remarkably stable beta at that, with most of the functionality of its Classic predecessors. Add a handy drawstring pouch, and this one's a keeper!

good news: Righteous software. OS X support. Suave graphite looks.
bad news: Suave is boring. Soft wheel button.



Snap-on colored backs make iOptiJr the most fun device of the lot.

iOptiJr

Company: Macally

Contact: 626-338-8787, www.macally.com

Price: \$39 (SRP)

Requirements: Power Mac, Mac OS 9 or later, USB port

If you're drawn to the red glow of Apple's Pro Mouse, the iOptiJr is for you. Its completely clear case lets the tracking light shine through, even if you snap on one of the included color (Blue, Green, or Graphite) back plates.

Like the PocketMouse, iOptiJr is essentially a standard model with two buttons and a scroll wheel, shrunk down to fit the four-finger clutch. Unlike the PocketMouse, it has a sufficiently stiff wheel button so that ham-handed folks can avoid inadvertently clicking the wheel.

The iOptiJr is terrific, but its software is merely adequate. For starters, there's no two-button chording. Options for the three available buttons include Click, Double Click, Click Lock, Keystroke, and optional modifier keys (Command, Control, Option, Shift, and Lock). You can also set buttons to open your email client, Web browser, or any item you specify in the Macally control panel.

As for tracking, the nine increments between Fastest and Slowest let you set the cursor speed *almost* precisely enough—somewhere between fast enough to track accurately and *too* fast. But none of the speed settings provided quite the smooth, stutter-free tracking our top rating demands.

good news: Cool case reflects your personal style. **bad news:** Clear and translucent may not be your style.



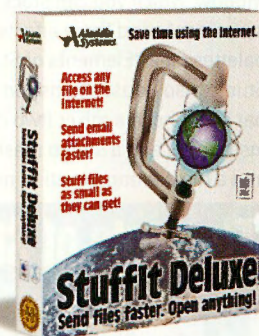
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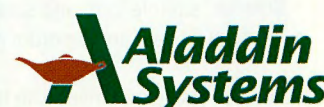


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This space-age design thinks a little *too* different for our taste.

MiniPro Ti

Company: Contour Design

Contact: www.contourdesign.com

Price: \$34.95 (SRP)

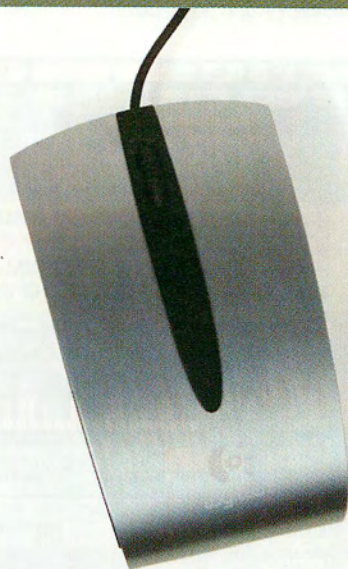
Requirements: Any Macintosh, Mac OS 8.5.1 or later, USB port

We usually think unconventional hardware design is a good thing, but not so in the case of Contour's MiniPro Ti. We never thought of our hands as freakishly large until we put them on the MiniPro, which fit best between our thumb and middle finger, leaving only the index finger up top for button duty. Even after a week of use, we couldn't stop it from drifting to a side angle—thus throwing off our basic orientation (up, down, left, right) onscreen. Plus, we couldn't get a grip on the button-behind-a-button (as opposed to the traditional side-by-side) arrangement.

The MiniPro uses a Contour-specific version of the popular USB Overdrive software, providing basic click-action assignment and decent speed and acceleration settings: Slow, Medium, or Fast, each with five increments of acceleration. We couldn't quite find the sweet spot, though, and the cursor went all herky-jerky with relatively little provocation (aka caffeine).

We love the MiniPro's look and its hard plastic carrying case—ideal for on-the-road business types giving simple, push-button presentations on Titanium PowerBooks—but it's not so pretty in day-to-day use.

good news: Way small. Elegant design. Protective carrying case.
bad news: Form kills function. Skittish tracking.



Logitech must have been reading our minds when it designed the svelte Traveler.

MouseMan Traveler

Company: Logitech

Contact: 800-231-7717, www.logitech.com

Price: \$49.95 (SRP)

Requirements: Any Mac, Mac OS 8.6 or later, USB port

We originally planned this review as a three-way roundup, but at the last minute the MouseMan Traveler arrived at the door—and it *really* rang our bell. If ever a mouse earned the designation *badass*, this is the one.

From a purely functional standpoint, Logitech stacked the Traveler's deck with a second optical tracker, effectively doubling the mouse's tracking ability. We couldn't push this one fast enough to produce the onscreen cursor spasms that plague other optical mice.

The Traveler has everything we want in a mouse: two buttons (sleekly integrated into the mouse body, à la Apple's single-button Pro Mouse), a scroll wheel (with a good, stiff button you're not likely to move accidentally), a perfect-length cord that's thinner than average (and you get a 3-foot extender), and a handy carrying case made of PVC.

Freakin' Awesome as it is, the MouseMan isn't quite perfect: the software lacks some features (namely two-button chording and fine acceleration control), and the unit might not fit all hands as perfectly as it fit ours. Finally, it's not cheap—but it is almost 10 bucks less than Apple's \$59 Pro Mouse, and it's quicker and more responsive than any mouse we've seen.

—Niko Coucouvanis

good news: Dual optical sensors. Comfortable to handle despite its puniness. **bad news:** Doesn't use Kensington MouseWorks.



PHOTOGRAPHY BY W. B. JONES

Storm 1.5

audio

Company: Arturia

Contact: www.arturia.com

Price: \$225.00 (SRP)

Requirements: 300MHz G3 or faster, Mac OS 8.6 or later, 64MB RAM, 150MB free hard disk space, CD-ROM drive

Creating professional-quality music on the Mac has traditionally been a costly and intimidating proposition for amateur musicians. Enter Arturia Storm—a stand-alone recording studio packing virtual synthesizers, samplers, drum machines, and a host of effects options into a relatively affordable, easy-to-learn package.

After a quick and painless installation, Storm launches with a Studio Builder window, which you can stock with up to four instruments and three effects from onscreen palettes (see “Elements of Storm,” below). Studio also houses transport controls, a 400-bar sequencer, a mixer (two channels per instrument and a stereo master channel), and a master transposition module.

Elements of Storm

Here’s a list of the goods you get to play with in this virtual studio:

INSTRUMENTS

- Arsonic** analog bass synthesizer
- Bass 52** bass guitar synth
- Equinox** chord synth with oscillators and low-pass filter
- EZTrack** external audio recorder
- H30plus** four-part sample player
- Hork** sample-based drum machine
- Meteor** drum machine utilizing electronic tones
- Orpheus** polyphonic synthesizer
- Psion** drum machine with electro samples
- Puma** percussive drum machine (congas, shakers, and so on)
- Scratch** sample loop and scratch player
- Tsunami** virtual analog drum machine

You can also experiment with these effects: chorus, compressor, distortion, dual delay, flanger, low-pass filter, reverb, ring modulator, and sequence filter.



Nice rack! Storm’s Studio looks just like the real, rack-mounted hardware deal.

Additionally, you can download new Studio modules from Arturia’s Web site as they’re developed—so Storm grows with you at no extra cost. The Web site also offers tutorials, support, and development news. Throw in the comprehensive paper documentation, and you’ve got an incredibly user-friendly package.

In use, Storm is versatile, supporting real-time and step (non-real-time) sequencing. We got our groove on in real time: composing patterns by clicking synth keys and drum sounds in the relevant modules as the sequence played (and we listened), and building songs by stringing together the patterns linearly.

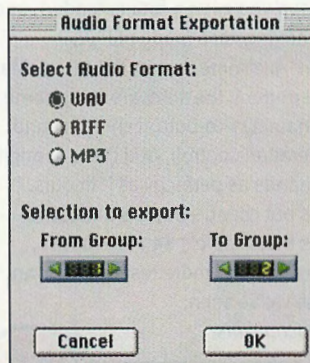
You can control Storm’s keys, buttons, knobs, and faders externally via MIDI input, and the software performed well as a VST instrument in popular sequencers (we tested it with Cubase VST and Emagic Logic). The effects quality is impressive—especially when we routed effects back to each other to

create deeply layered sounds. Once the song’s finished, you can export it as an audio file in WAV, AIFF, or MP3 format.

The biggest downside of Storm is that it limits you to only four instruments and three effects per Studio session. Also, Storm’s sample-import option is slow, especially with bigger samples; and its groove quantization is limited to an unimpressive shuffle option.

Overall, Storm is a great tool, especially (but not only) for musicians at the beginning of their game or on a limited budget. Storm offers flexibility, choice, and growth without any major hamstrings—a rare combination in its price range.—Andrew Reid

good news: Lots of instrument and effects options. Excellent online support. Multiple effects routing.
bad news: Only four instruments and three effects available at any one time. Slow sample import.



Wanna get fancy? Export your track via this window, then reimport it as a sample and use it as an element in your next song!



Drag and drop whichever modules you fancy into this Studio Builder window to create a custom rack.

Photoshop® Beginners Read this side

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- Learn from NAPP's private members-only Web site, loaded with tips, tutorials, downloads, news, video clips, and more
- Get free Photoshop tech support from our Help Desk and product advice from our Advice Desk
- Get help from other members in our online forums and our "NAPP Network"
- Get discounts on Adobe Photoshop training seminars, training videos, books, and more
- Get special member deals on everything from color printers to software upgrades to Zip® disks, and everything in between
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powerplay

The future's so bright, we've gotta play games!



First Peeks

Game Betas Excite Anticipation

We love our jobs—especially when it means fiddling around with new, cool hardware and software, sometimes even before a product hits store shelves. Lately, it seems we have more game betas floating around in our office than anything else. Instead of leaving you to stew in your own jealousy of us, we thought we'd give you a quick peek at some upcoming games we're playing.—*Kris Fong*

Red Faction

Company: GraphSim (www.graphsim.com)

If you like *Deus Ex*, you're gonna love this game! This first-person, action-adventure shooter is a painstaking exercise in strategy and stealth. As you rebel against the Ultor Corporation and wind your way through underground mines and labs up to Mars's surface, you try to avoid the plague like... well, the plague. Not only can you blow holes through the enemy, you can blow holes through surrounding walls with a mighty assortment of weaponry. (Just make sure it's a big hole—we got stuck in one and watched helplessly as two guards beat the stuffing out of us!) You also get to pilot vehicles such as submarines, tanks, and helicopters. Graphics and animation are top notch and snappy—we can't wait to get our trigger finger on the final version!

Otto Matic

Company: Aspyr/Pangea (www.pangeasoftware.net)

Pangea—best known for its charismatic adventure game, *Bugdom*—continues in the same tongue-in-cheek groove with its latest development. In *Otto Matic* (to be distributed by Aspyr), you control a robot who bounces

from planet to planet (and sometimes from turtle to turtle) in the effort to save pokey humans from UFO abduction while shooting baddies with a ray gun, among other weapons. Gameplay is solid, with great graphics and fun sounds. Mixing a little *Lost in Space* with *Mars Attacks*, *Otto Matic*'s retro-inspired worlds are truly unique and colorful, as are the loony characters that inhabit them. (We love the attack of the killer tomatoes!) If you like *Bugdom*, you'll feel right at home with *Otto Matic*.

Vampire: The Masquerade—Redemption

Company: MacSoft/Activision
(www.wizworks.com/macsoft)

Here's one you can sink your teeth into. In this darkly gothic role-playing game (RPG), which plays somewhat like *Diablo*, you assume the role of Christof, a vampire seeking revenge on an old nemesis. The storyline spans over 800 years as you start in Prague and stroll (actually, awkwardly lumber) through towns in medieval Europe and eventually into a punked-out, modern-day New York, complete with an assortment of mohawked thugs, trenchcoat-wearing mobsters, and bimbettes clad in bad 1980s fashion. Navigation is a click-and-follow affair, which we hope gets smoothed out in the final release. Still, the game makes it easy to dive in from the get-go.



More than just a shooter, *Red Faction* requires you to put strategy and stealth into your game plan.



Careful—a dunk in the drink will kill *Otto Matic*'s precious circuitry (though we were amazed to see that he doesn't sink).

We tried hard, but a bug in *Vampire* prevented Smithy from even acknowledging us.

The Game Plan

Developers Talk Game Development

The New Year brings goals to mind as we vow to fulfill our resolutions (and ditch them one week later) and roll out our game plan for the next 12 months. So we bugged Pangea Software's Brian Greenstone, Freeverse Software's Colin Lynch Smith, Presto Studio's Greg Uhler, and MacRun Games' Richard Soberka to tell us what the future holds for their respective companies, whether Mac OS X has forced them to *think different*, and how they determine what type of games to bring to the Mac. Here are a few of their candid remarks.—Kris Fong

MA: In what ways will your company contribute to or change Mac gaming in 2002?

Smith: Freeverse will continue to be one of the few companies concentrating on Mac-first and Mac-only games. I think our new game, WingNuts, will make PC gamers insanely jealous, because it rocks and because they [Mac users] can only buy it for \$824. We bundle it with a \$799 iMac!

MA: How has Mac OS X affected your company's development of titles?

Greenstone: We don't have InputSprocket support anymore.

Uhler: Mac OS X is the future for the Mac and Mac gaming, so we've created an OS X-native (optimized for OS X, not just compatible) version of Myst III: Exile that takes advantage of all OS X has to offer.

Soberka: Apple has fired some of its own technologies in OS X, like InputSprocket and NetSprocket, so for us it is much more work to enable some features under OS X.

Smith: Since [Mac OS] 10.1 came out and addressed lots of little issues, it's been pretty smooth. There's still a bit more work, making sure a game looks and plays well in both 9 and X, but OS X is so pretty, it's well worth it!

MA: How does your company decide what type of game to develop or port to the Mac?

Greenstone: We base it pretty much on our customer feedback. That tells us what kinds of games they like the most.

Uhler: We tend to look at the Mac community and gauge their interest level in each product that we create.

MA: What titles are you planning to bring to the Mac in 2002?

Uhler: Myst III: Exile DVD, [which] will allow players to explore the worlds of Exile without any annoying interruptions due to disc swapping.

Soberka: A new platform game called Djirann should be ready in 2002.

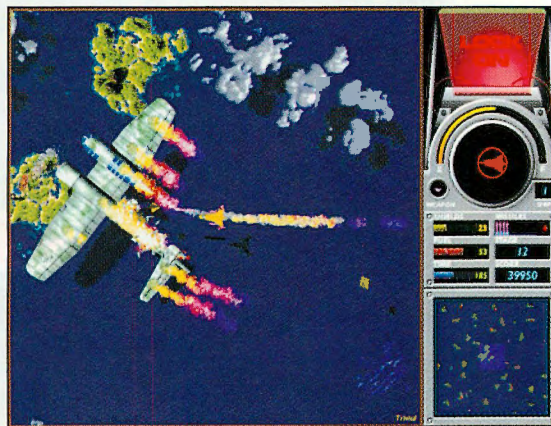
Greenstone: Otto Matic is coming out in December via Aspyr. Beyond that, who knows?

Smith: Some new card games, including a Kid's Pack with crazy eights, go fish, old maid, and strip poker (OK, maybe not strip poker).

Djirann steps forward to prove that it's not easy being green.



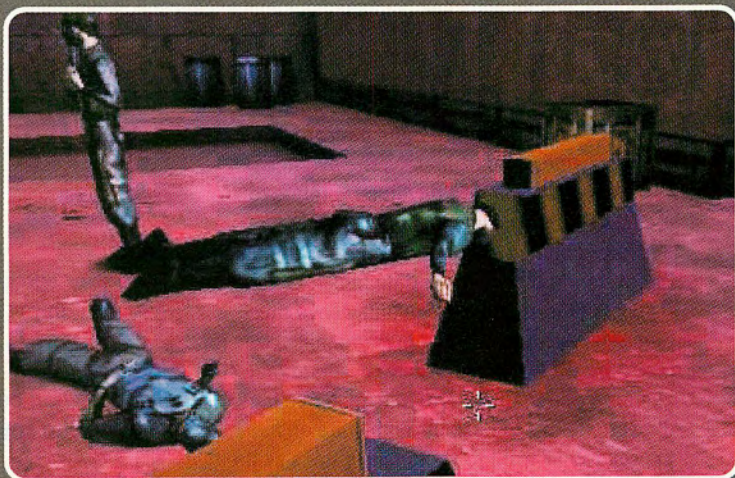
Myst III on DVD means no more discus interruptus.



The Boss shows his true colors as he's taken down in WingNuts.

SCREENSHOT OF THE MONTH

When performing the human cannonball trick, always aim for the mats.



Artist's Statement

This is a shot from Deus Ex. A terrorist's head got stuck in a concrete barrier. I thought it was pretty funny.—Will Normandy

Send your best screenshots to letters@macaddict.com with the subject line "Screenshot of the Month" if you crave fame and glory (or at least fleeting satisfaction upon seeing your screenshot in a magazine).

how to

When off-the-rack just won't do.



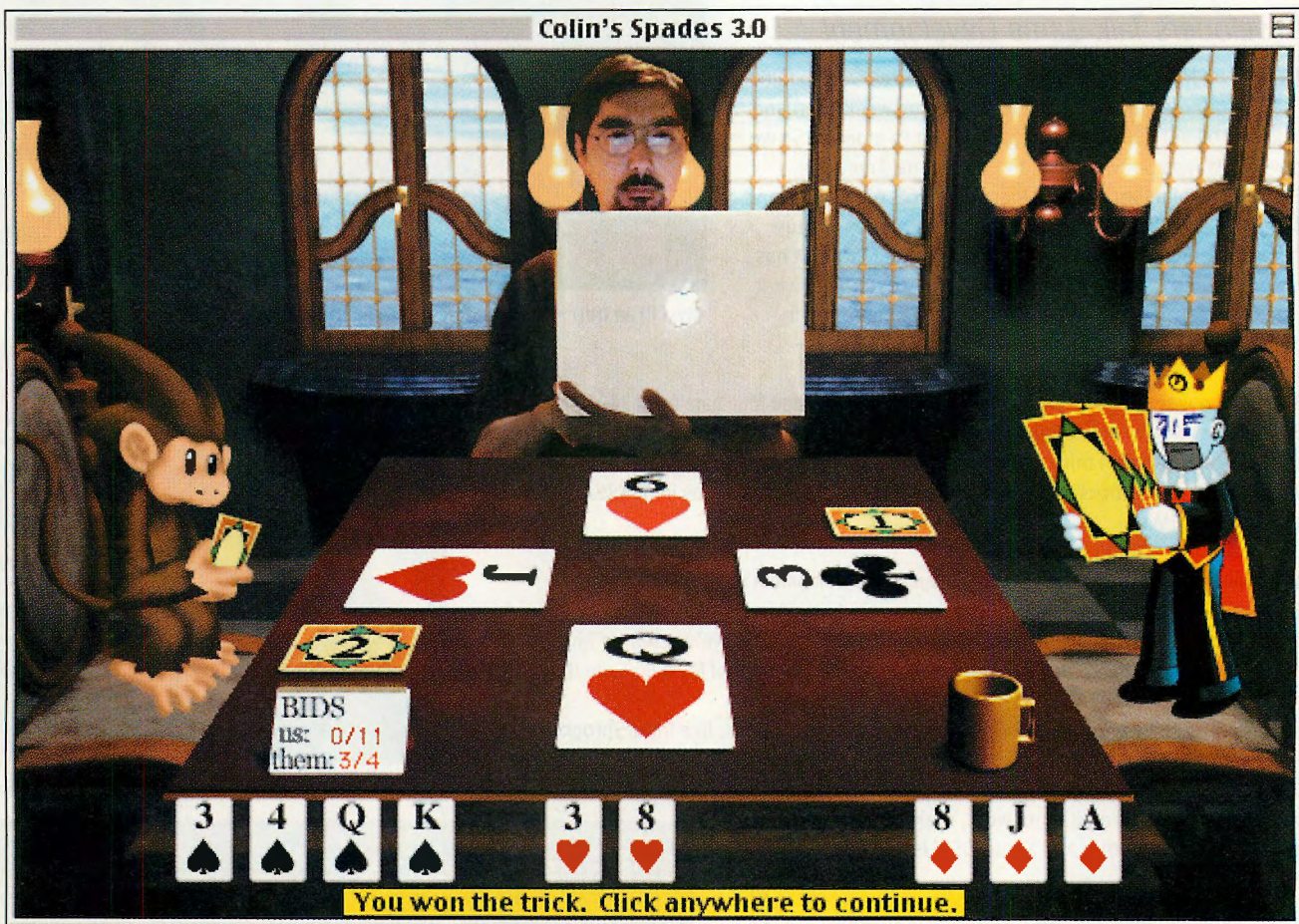
TOUGH
This stuff's for the pros.



TRICKY
It'll take some effort, but you can do it.



EASY
The fundamentals, if you will.



Hack Your Games (and Other Apps)

The Mac is an awesome platform for games. Unfortunately, the average narrow-minded developer prefers to focus on Windows, leaving it up to Mac-dedicated publishers to port games to the Mac. But rather than convert PC data files to Mac resource files, developers usually leave the original files intact when reprogramming code for Mac ports. This is bad news for die-hard Mac gamers—due to the lack of Mac resource files, they often have to hack through code on a peecee if they want to customize games as their Wintel counterparts can.

The good news is, if a game has its Mac resource code intact, customization is an open road—if you're brave enough to persevere and get through the tedious task of hacking file resources with ResEdit. If you're looking for a truly unique gaming experience, try on these tutorials for size. (Note: These hacks won't work in Mac OS X.)

In This Section

p65 Put Yourself in the Game

Feed your ego by creating an onscreen character in your own image in Aspyr's iPuppet Presents Colin's Classic Cards.

p68 The 5-Minute Hack

If you're short on time, get quick gratification by adding your funniest one-liners to any iPuppet card game with a simple text hack.

p71 Modify Game Sounds (The Easy Way)

Afraid of drowning in a pool of file resources? Here's an easy way for anyone to hack sounds in iPuppet (or any game with sound resources).

p71 Hack Your Sounds (The Comprehensive Way)

If you're looking for a way to swap out sounds in games and applications, get the pro's method for creating sounds and embedding them into programs.

Put Yourself in the Game

by Jason Whong



WHAT YOU NEED

- 3D Spades Deluxe (part of iPuppet Presents Colin's Classic Cards)
- MacAddict Freeverse Puppet Kit
- Digital camera and tripod
- Adobe Photoshop 5.0 or later
- ResEdit

Find MacAddict Freeverse Puppet Kit and Adobe Photoshop 6.0 tryout on the Disc!

Software game maven Freeverse Software (www.freeverse.com) have remained true to the Mac way of programming—anyone with a copy of ResEdit, which is freely available from Apple's FTP site (see "ResEdit—Don't Leave App Hacks Without It," below, for the URL), can modify any Freeverse-created 3D game to his or her heart's content. The current iPuppet release, distributed by Aspyr, uses resource files as game plug-ins.

This proprietary puppet plug-in format enables you to swap out the onscreen opponents that appear in any iPuppet game (Spades, Hearts, Euchre, and Pitch). It also stores character information, including visuals, sounds, and text dialogue, which gives you an opportunity to literally put your face on the game itself. With the MacAddict Freeverse Puppet Kit, you can create a puppet of yourself to use in any iPuppet

card game. Here's how to seat your own likeness at a Spades card table (or at the table of any other iPuppet game mentioned above).



iPuppet characters are created from a series of resource photos that you can customize with ResEdit.

ResEdit—Don't Leave App Hacks Without It

by Kevin Savetz

Back in the old days, ResEdit was a tool only a programmer could love (or use). These days, the average Mac user is more tech savvy and ambitious, and a growing number of users, dissatisfied with off-the-rack programs, have been turning toward the tool for application customization. ResEdit lets you replace sounds, swap out graphics, change file types, and much more.

You can download ResEdit free from Apple's FTP site (ftp://download.info.apple.com/Apple_Support_Area/Apple_Software_Updates/English-North_American/Macintosh/Utilities/ResEdit_2.1.3.sea.bin). Remember: Always work on a copy of any app so you won't permanently damage your original.

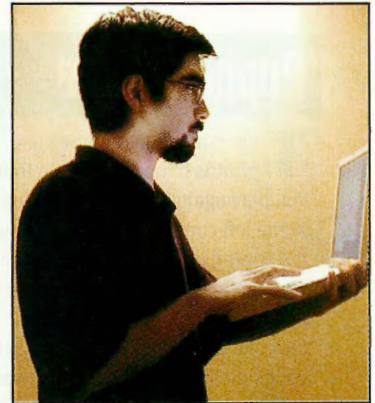


CREATE YOUR PUPPET'S SKIN

1 Snap Your Mug Shot

Colin's Classic Cards

lets you play cards against three onscreen opponents (puppets) seated around a table. Each puppet displays 9 photo poses, meaning you need 27 photos of yourself (see "Puppet Poser," p66, for the list of poses) to "sit" in any of the three chairs. (If you're strapped for time, snap the required 9 poses for use with one chair of your choice—just be sure to only load this puppet in the appropriate chair when playing the game.) If you want your puppet to hold cards, print out a couple copies of FreeverseCard.pdf from the Puppet Kit on a color printer, cut out the cards, and hold them in your photos.



Here's one of the poses we shot for the left chair.

Sit forward on a chair in front of a white background and, using a tripod-mounted camera, snap pics of yourself, striking all 9 poses for the left chair and the center chair. For the right chair, you can save time by horizontally reversing the left chair photos in Photoshop.

2 Knock Yourself Out (of the Pic)

Before you add your photos into the puppet resources, you have to remove, or *knock out*, the backgrounds from your images or the puppet won't draw correctly. Open one of your pics in Photoshop, select the entire image (Command-A), copy it (Command-C), and paste it into a new layer (Command-V). Turn off the Background layer visibility (click the eye icon next to the layer name). Select the magic wand tool, set the Tolerance option anywhere from 20 to 30, and, holding down the Shift key, click all background areas of the new layer to select everything but yourself. Then press the Delete key to remove the background. Use the eraser tool to remove any extra junk. Save the image as a Photoshop document (PSD), naming it by chair position and pose (for example, center-normal.psd and left-happy.psd). Repeat with the rest of your images.

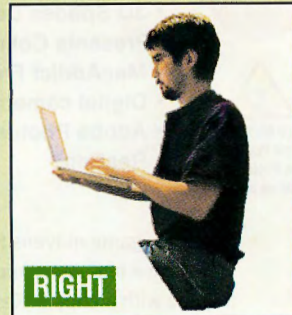
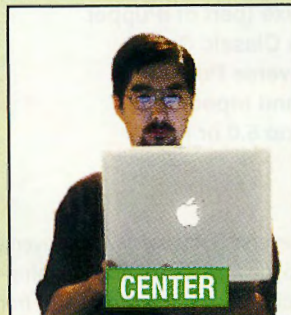
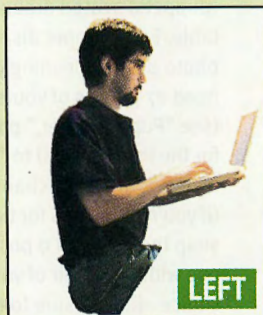


Remove the background from your images by selecting everything behind you with the magic wand tool.

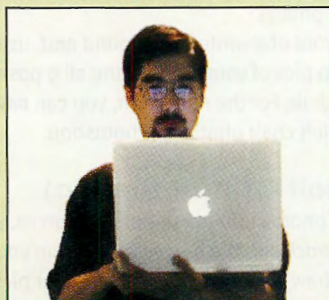
Puppet Poser

The iPuppet card games use photos to bring puppets to life. You play against three opponents—one in the left chair, one across from you in the center, and one in the right chair. You need 9 photo poses to make a puppet, or 27 for all three chairs. Capture your butt and upper legs in your side shots so the illusion works. To speed things up, shoot just the center and left poses (18 shots) and reverse the left poses in Photoshop.

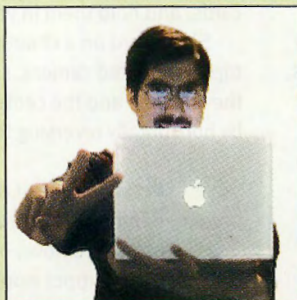
THE CHAIRS



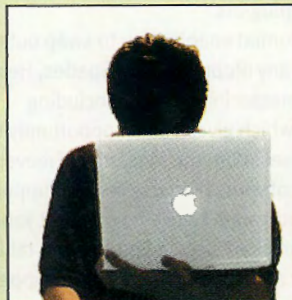
THE POSES



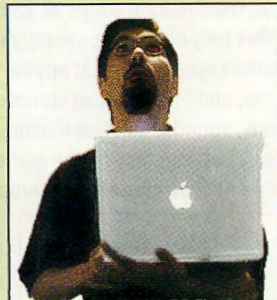
NORMAL For this pose, look at your cards (if you choose to have cards) while facing your adjacent opponent. This pose has the most onscreen time, so make it a good one! This is also the pose from which all animations start, so be sure to strike a position you can comfortably return to during your photo shoot.



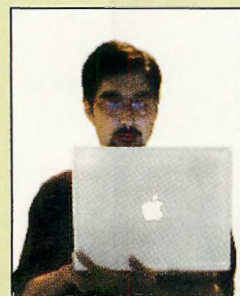
HAPPY When something good happens in the game, your puppet can react. Smile, raise your hands, or express joy in some way. Look at the camera for more dramatic emphasis.



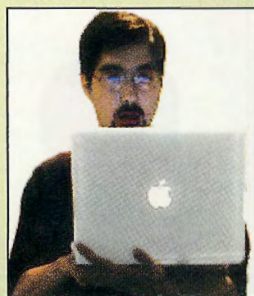
SAD If your character isn't doing so well, your puppet may exhibit feelings of disappointment. Consider frowning, scowling, or tearing out your hair while looking at the camera.



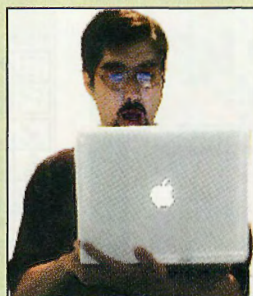
LOOK UP During gameplay, if the player moves the cursor above your puppet's head, the puppet responds—consider an appropriate reaction, like looking up. Don't look at the camera for this pose.



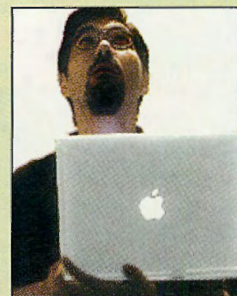
BLINK Use the Normal pose but shut your eyes.



TALK1 Use the Normal pose but open your mouth slightly.



TALK2 Use the Normal pose but open your mouth wide.



FIDGET1, FIDGET2 A three-frame animation starts with Normal, continues with Fidget 1, reaches Fidget 2, then reverses sequentially. This animation occurs before an important event, such as revealing your cards. Be creative in your movement.

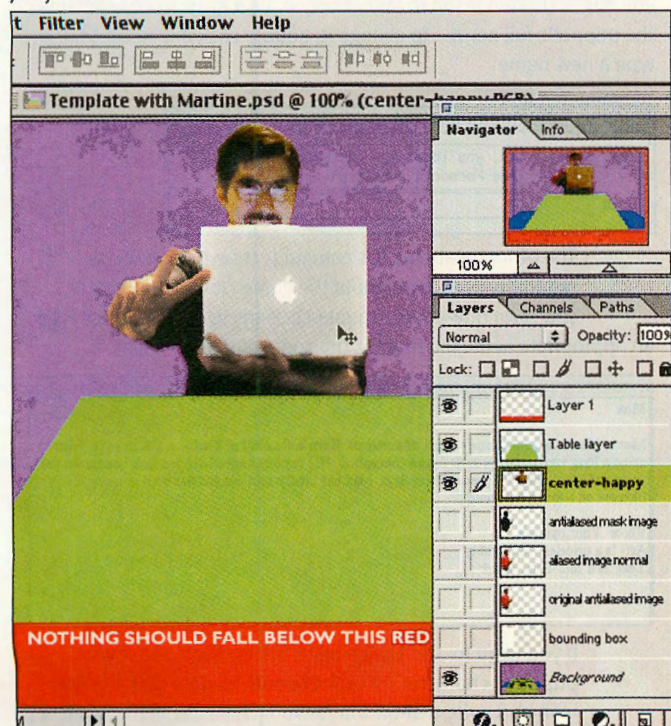
3 Paste Yourself into the Template

Open the Puppet Kit's Template with Martine.psd in Photoshop—toggle the layer visibility icons on and off to get an idea of how Freeverse's Martine puppet image is built. (Turn off the visibility of the bounding box layer and Martine's three image layers before working on your own puppet.) Open your Normal pose in Photoshop, click the knocked-out layer, select the entire layer (Command-A), copy it (Command-C), click the template window, and paste your pose into the template (Command-V). In the Layers palette, move this photo layer underneath the Table layer.

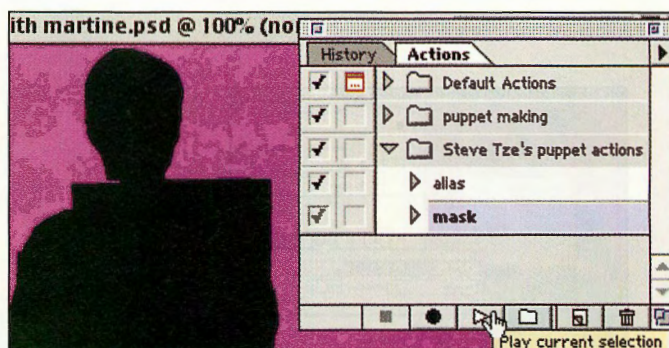
If your likeness is disproportionate to the table, resize it. From the Edit menu, select Transform, then Scale—a bounding box will surround your selection. Holding down the Shift key to retain the size ratio, drag one of the box's corner points either inward (to size yourself down) or outward (to make yourself bigger). Double-click inside the bounding box to make the change. Use the move tool to reposition your image. Use the magic wand to remove any parts of the image that lie underneath the table—select the Table layer, click the table with the magic wand, click the targeted photo layer in the Layers palette, and press Delete. Name this layer by chair and pose (for example, center-normal) by double-clicking the layer in the Layers palette and typing in a name.

Make sure your puppet doesn't obstruct any of the black areas on the table, which are reserved for the cards. Repeat with your other images, adding them all to the template and keeping the image sizes the same. To get a better view of your image placement, toggle each photo layer's visibility on or off.

Reuse each of your left chair shots for the right chair by selecting one of the left chair layers and dragging the layer onto the copy layer icon (a dog-eared sheet). Select this layer copy. From the Edit menu, choose Transform and then Flip Horizontal to flip the image—rename the layer appropriately for the right chair. Place each pose so it's in alignment with your Normal pose—erratic placement will result in jerky animation.



Here is our Happy pose for the center chair as it appears in the Puppet Kit's template.



No need to build your own mask—we threw in a Photoshop Action that creates one for you.

4 Mask Your Identity

For your puppet to show up properly onscreen, you need to create a mask, an attached layer that lets you dictate which parts of an image are displayed or concealed for each of your poses. Freeverse's Steve Tze was kind enough to create a set of Photoshop Actions (in the Puppet Kit), one of which automates masking.

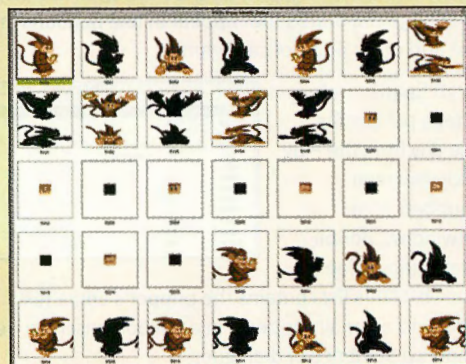
Click the Actions palette in Photoshop, and then click the options triangle in the upper-right corner of the palette. From the drop-down menu, select Load Actions, and then navigate to Steve Tze's Puppet Actions, click Load, and select Mask from Tze's folder in the Actions palette. Next, select one of your photo layers and click the play button at the bottom of the Actions palette—a mask layer appears automatically. Repeat for each photo layer except Talk1, Talk2, Happy, and Sad.

Map Your Puppet

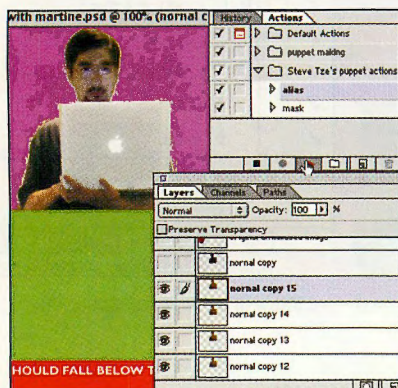
Confused about which photos go where in ResEdit? Here's a simple table that shows which ResEdit PICT ID corresponds to which particular photo.

POSE	LEFT	CENTER	RIGHT
Normal	5000	5002	5004
Happy/Sad (paired)	5100	5102	5104
Look Up	5200	5202	5204
Blink	5210	5212	5214
Fidget1	5300	5302	5304
Fidget2	5310	5312	5314
Talk1/Talk2 (paired)	5400	5402	5404

To determine each Mask ID number, add 1 to the PICT ID of its corresponding photo. For example, your Normal photo in the left chair is 5000—therefore, its mask is 5001. Likewise, your Blink shot in the center chair is 5212—its mask is 5213.



ResEdit lets you tinker with the guts of any app—here we've opened up the Monty Zuma Puppet PICT resources, which show the individual images and masks that make up the game character.



Even if you really are an angel, get rid of any halos around your puppet by roughing up the edges.

5 Rough Up Your Photos

To make your puppet show up properly onscreen, you need to roughen up the edges of your photos. Use Tze's Alias option from the Actions palette to give some edge to each photo layer—select a photo layer, select the Alias action, and then click the Action palette's play button as in step 4. Repeat for each photo layer except Talk1, Talk2, Happy, and Sad.



Keep your hands and arms inside—the white bounding box should completely contain all image poses for that particular chair.

6 Surround Yourself with Borders

Under the Layer menu, select New, Layer to create a new layer. Choose white as the foreground color in the tool palette. Turn on layer visibility for all image layers. Then select the rectangular marquee tool and draw a rectangle around one of the chairs so it completely surrounds all the poses. Select the paint bucket tool and click inside the rectangular selection to fill it with white. Drag the layer in the Layers palette underneath all your photos but above the Background layer. Repeat with the other two chairs to create a total of three white bounding-box layers. Save the document as a Photoshop file.

The 5-Minute Hack Modify Game Text

by Jason Whong



If you've got a way with words, you can rewrite the characters' dialogue.

WHAT YOU NEED

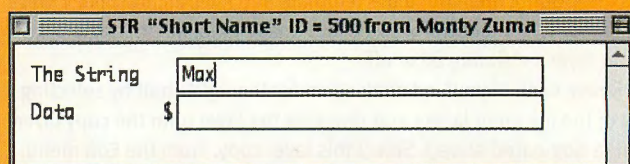
- Any iPuppet card game
- ResEdit

iPuppet games feature onscreen characters that engage in witty text banter, but you can easily rewrite their dialogue in a jiffy. Here's how to change the blurbs that appear in text balloons in 3D Spades Deluxe and other iPuppet card games.

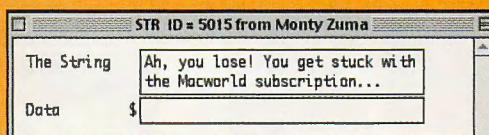
1 Drag a 3D Spades Deluxe character's puppet file (choose any from the Plug

Ins folder or pick your own custom-built puppet) onto ResEdit. In the window, double-click the STR (text string) icon to open its resource list. This list contains the puppet's entire text vocabulary, which occasionally appears in a balloon onscreen—each ID number denotes a sentence of dialogue.

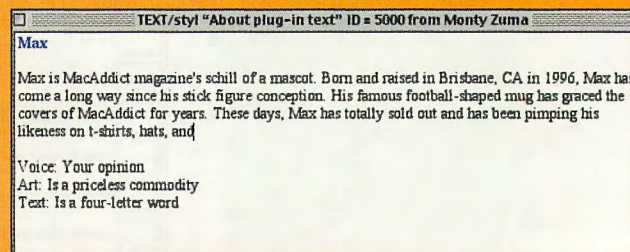
ID	Size	Name
10309	14	"Finder missing application's name string"
128	8	
129	17	
500	4	"Short Name"
501	11	"Long Name"
4970	27	
4980	15	
4981	16	
4982	36	
4990	7	
4991	18	
4992	13	
5000	38	
5001	30	



2 Double-click ID 500; this resource contains an abbreviated name for the puppet. If you're modifying your own puppet, type three letters for your name in The String (for example, you might shorten Jason to Jay); if not, leave it as is. ID 501 contains the puppet's full name—to change it, double-click this resource and type a new name.



3 The other unlabeled IDs contain text sayings your character randomly uses throughout the game. You can substitute your own one-liners. Double-click any ID. In The String, type an appropriate sentence that fits the context of the original.



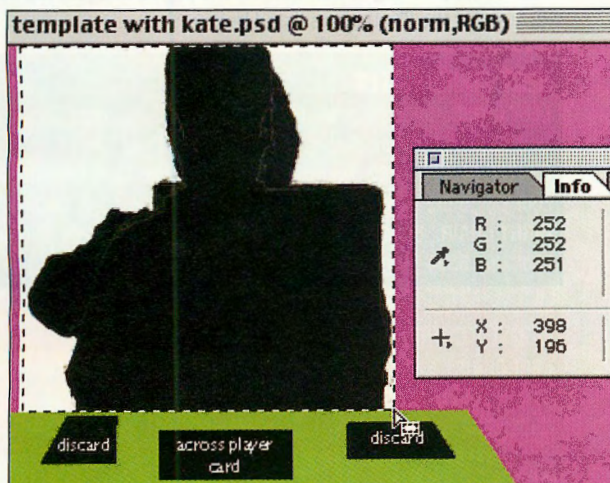
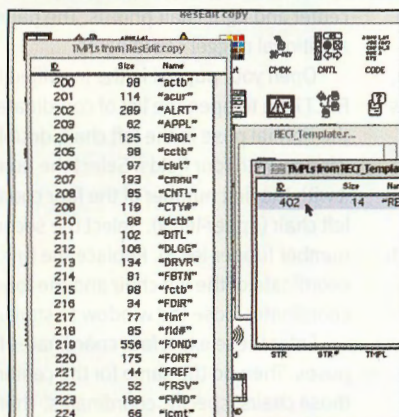
4 If you want to add background information about your puppet's character (or lack thereof), double-click the Text icon and write a short bio for your character in the window. When you're finished, save your modified puppet file and add it to the game's Plug Ins folder.

BUILD YOUR PUPPET'S BACKBONE

7 Edit ResEdit

Before you roll up your sleeves and get to work on the guts of your puppet, you need to modify ResEdit so you can edit a puppet's RECT (rectangle) resource file. Click your ResEdit app once to select it and then make a duplicate copy (Command-D). Drag the ResEdit copy onto the original to open it. Then drag the Puppet Kit's RECT_Template.rsrc file onto the original ResEdit. In the RECT_Template.rsrc window, double-click the TMPL (template) icon and copy the RECT resource (Command-C) from the list. Then, in the ResEdit window (the copy you're modifying), double-click the TMPL (template) icon and paste the RECT resource (Command-V) into the list window to add the new template to ResEdit. Save the modified ResEdit and increase its preferred memory size by 10,000K; then quit the unmodified ResEdit app and set it aside.

Add Freeverse's RECT resource to ResEdit's TMPL (template) list to hack into the puppet files.



Find the exact x and y coordinates your puppet spans by holding your cursor over opposite corners of a rectangular selection and viewing the coordinates displayed in the Info palette.

8 Add Image Frames to the Resources

Copy the Chelsea puppet from the Puppet Kit and rename the copy with your own name. Drag this new puppet file onto the modified version of ResEdit to open it. Go back to your Photoshop file and select the bounding-box layer of any chair position. Enable the layer visibility of all photos of you seated in this chair. Using the rectangular marquee tool, draw a rectangle so it tightly contains all of the photos—this keeps the y (vertical) and x (horizontal) coordinates the same for all poses in that chair. Click the Info palette to view the y and x screen

coordinates. Jot down the coordinates of the upper-left corner (y, x) and then the lower-right corner (y, x) of the marquee by placing your cursor over each of these two corner points—note which chair these four coordinates belong to. Keep the coordinates in this exact order: upper-left y, upper-left x, lower-right y, lower-right x. Repeat with the remaining two chairs. Important: Whatever you do, *do not* move these boxes once you place them, or your puppet may end up missing a couple of limbs.

Next, turn off the visibility of all layers except for the Normal pose and corresponding white box for any of the three chairs. Click either of the two visible layers, and, with the rectangular selection still highlighted, select Copy Merged from the Edit menu to copy the isolated graphic. Switch back into ResEdit, double-click the PICT icon, and locate the corresponding PICT resource for the Normal pose—ID 5000 for the left chair, 5002 for the center, or 5004 for the right—and paste (Command-V) your image over the original (for a table of which images go where, see “Map Your Puppet,” p67). Do the same for the other pictures and then their masks, pairing each image or mask with its corresponding white box, except for Talk1, Talk2, Happy, and Sad—you'll paste these images together in pairs.

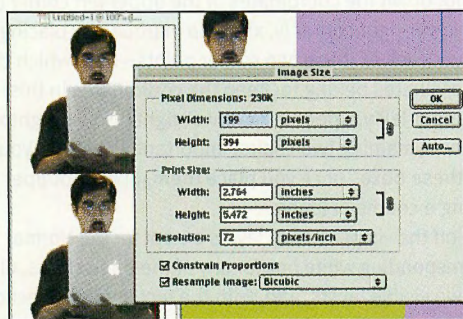
9 Add Paired Frames to the Resources

Each chair's Talk1, Talk2, Happy, and Sad poses require a pairing to build the image resource. Choose a chair and enable layer visibility on the white box and Talk1 of that chair only. Click the Talk1 layer and, using the rectangular marquee, trace around the white box, then copy the selection (Command-C). Create a new document (Command-N). In the dialog box, multiply the current document height by two and type this number in the Height field, and then click OK. Paste Talk1 (Command-V) into the new document, and use the move tool to place it exactly at the top (press the arrow keys to fine-tune its positioning).

Return to the Photoshop template, click the Talk2 layer, enable visibility, use the marquee to select around its white box, and copy the selection. Paste it into the new document and position it at the bottom. Save this new document as a Photoshop file. Next, perform steps 4 and 5 to generate the masks and roughen the pictures. Repeat this entire step for Happy and Sad, with Happy on the top, and Sad on the bottom. Then repeat for the other two chair positions.

Happy and Sad are stacked as a paired resource—create a separate Photoshop document to build it.





Calculate the y and x coordinates of the paired image from the Image Size information.

10 Get Coordinates for the Pairs

These new documents containing paired images need a different set of y and x coordinates, called *nugget* coordinates, than the single image files due to the size change. Again, you need to jot down the upper-left and lower-right corner coordinates in y, x, y, x format (grab your notepad). The top nugget's upper-left coordinate is always 0, 0 (y, x)—write this down. Then select Image Size from the Image menu to view the paired image's dimensions. To determine the lower-right y coordinate, divide the image's height by two and subtract one. The lower-right x coordinate is the image's width minus one. For example, our Talk1/Talk2 image has a height of 394 pixels and a width of 199 pixels. Our top nugget's (Talk1) coordinates are therefore 0, 0, 196, 198.

Determine the bottom nugget's upper-left y coordinate by dividing the paired image's height by two. The upper-left x coordinate is 0. The lower-right y and x coordinates are the paired document's height (y) minus one and width (x) minus one, respectively. Therefore, in our image example, our bottom nugget (Talk2) coordinates are 197, 0, 393, 198.

Add this paired image to the PICT resources by pasting the image and mask as you did in step 8 into the corresponding ID numbers (see "Map Your Puppet," p67). Then repeat with the other paired images.

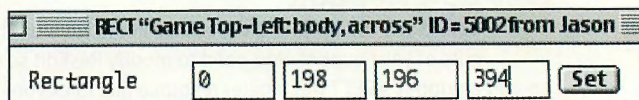
11 Add Your Character Portrait

When a player selects the onscreen opponents, each puppet has its own 160-by-100-pixel character portrait that appears in the selection window. Since this is the shot of you players will see before they pick your puppet as an opponent, make sure it's a good one! (Open the Chelsea puppet's PICT resources in ResEdit, and check out ID 6000 for some portrait ideas.)

Either snap a new pic of yourself or use one of your posed images. Open the image in Photoshop, and crop the image to a head shot. Knock out the background as outlined in step 2. For consistency with other puppet characters, create a black border around your frame and fill in the background with a solid color, though since this is *your* puppet, you can really do whatever you want with this graphic. When you're satisfied, select the entire image (Command-A) and select Copy Merged from the Edit menu. In your puppet's PICT resources window, double-click ID 6000 and paste in (Command-V) your new mug shot.



Your character portrait is the image players see when choosing opponents, so make yourself look good!



Type each image's y and x coordinates into the corresponding RECT window so the game knows where to draw the image onscreen.

12 Modify the RECT Coordinates

You know those coordinates you jotted down? The format in which you wrote them (y, x, y, x) constitutes the RECT (rectangle) coordinates of each chair. These coordinates tell the game where to start drawing the graphics onscreen. All of the left chair photos have the same RECT coordinates; the same goes for the center and right chair photos. The paired images have their own set of additional nugget coordinates.

Open your puppet in the modified ResEdit, and double-click the RECT icon to open the list of coordinates. To change coordinates for the normal pose in the left chair, double-click ID 5000 to bring up a window with four fields. Select the number in the first field and replace it with the first number of the four coordinates you wrote down for the left chair (upper-left y). Select the second field and enter the next number (upper-left x). Replace the third field with the lower-right y coordinate of the left chair and the fourth field with the lower-right x coordinate. Close the window to store all four coordinates.

Enter these exact four coordinates for the remaining left chair poses. Then do the same for the center and right chairs with each of those chairs' specific coordinates. Then enter the nugget coordinates in the corresponding ID numbers for the paired images. You need only worry about the ID numbers listed below.

RECT COORDINATES

LEFT CHAIR: 5000 (Normal), 5100 (Happy and Sad), 5200 (Blink and Look Up), 5300 (Fidget1 and Fidget2), and 5400 (Talk1 and Talk2)

CENTER CHAIR: 5002 (Normal), 5102 (Happy and Sad), 5202 (Blink and Look Up), 5302 (Fidget1 and Fidget2), and 5402 (Talk1 and Talk2)

RIGHT CHAIR: 5004 (Normal), 5104 (Happy and Sad), 5204 (Blink and Look Up), 5304 (Fidget1 and Fidget2), and 5404 (Talk1 and Talk2)

NUGGET COORDINATES

LEFT CHAIR: 6105 (Happy), 6110 (Sad), 6400 (Talk1), and 6410 (Talk2)

CENTER CHAIR: 6107 (Happy), 6112 (Sad), 6402 (Talk1), and 6412 (Talk2)

RIGHT CHAIR: 6109 (Happy), 6114 (Sad), 6404 (Talk1), and 6414 (Talk2)

13 Put Your Puppet to Use

Save your Puppet (Command-S), quit ResEdit, place your puppet file in the iPuppet Plug Ins folder, and launch the game. To choose your new puppet as an opponent, select Puppets from the Game menu, choose your puppet name from the Name drop-down menu, click OK, and admire your game physique.



Select your new puppet from the Spades Deluxe Puppets window to challenge yourself to a game.

Modify Game Sounds THE EASY WAY

by Jason Whong

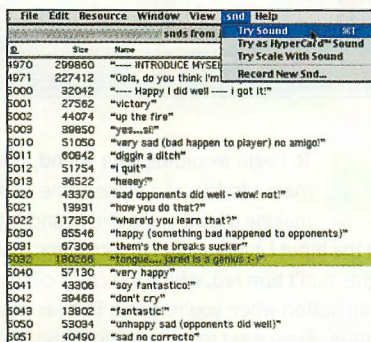


WHAT YOU NEED

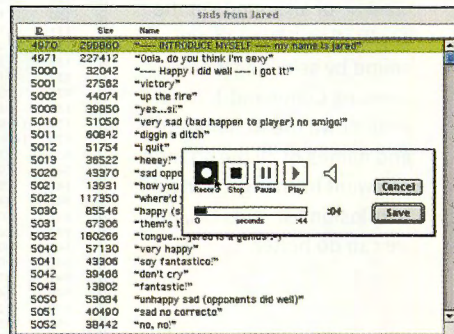
- 3D Spades Deluxe (part of Aspyr's iPuppet Presents Colin's Classic Cards)
- ResEdit
- A microphone

Whether or not you create your own game character, a unique way to enhance your iPuppet gaming experience is to replace a game's original audio tracks with your own sounds. Though it may seem intimidating, changing a game's audio files is simple. Here, we swap out character dialogue in 3D Spades Deluxe. You can replace spoken lines with your own voice repeating them word for word or come up with your own clever replacements—just keep the original lines' context in mind.

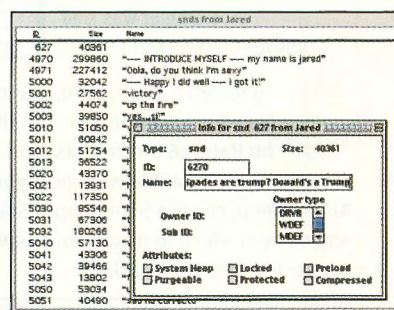
1 Select one of the original iPuppets or your own customized puppet, make a copy, and then open the copy in ResEdit. Double-click the SND (sound) icon to open the sound resource list. This numbered list contains the puppet's individual spoken phrases. To hear a phrase, click an item in the list and select Try Sound from the SND menu.



2 To record a replacement, make sure your Mac's Sound Input is set to Built-In Mic, and then select Record New Snd from the SND menu. Get close to your mic, click the Record button, say your phrase, and click Stop. To hear your recording, click the Play button. If you like it, click Save; if not, click Cancel and try again. ResEdit will save your sound as ID 128 in the resource list unless you record another sound before reassigning the ID number.



3 Jot down the ID number of the line you want to replace. Then click this line and press Delete. Click your new sound (ID 128), select Get Resource Info from the Resource menu, and type the ID number of the original in the ID field. In the Name field, type your spoken phrase. Repeat these steps for any other lines you'd like to replace, and then save the file. To hear your sounds, throw your puppet into the game's Plug Ins folder and start the game.



Hack Your Sounds THE COMPREHENSIVE WAY

by Kevin Savetz



WHAT YOU NEED

- ResEdit
- Sound Studio (\$35, www.felttip.com/products/soundstudio)
- Vortex Next Generation (\$35, <http://homepage.mac.com/felinegames>)

From the eardrum-melting explosions of a space shoot-'em-up to the happy waka-waka of Pac Man, sounds play a vital role in any game. Though most of us think of game sounds as enduring, you can easily modify sounds in many Mac games and affect the feel of the gameplay dramatically.

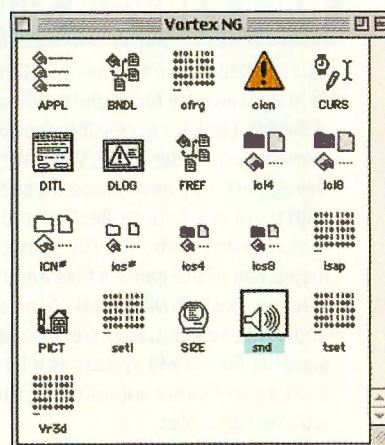
Sound tweaking isn't limited to just games—you can victimize any program with a sound resource for your hacking. For example, when Toast finishes burning a CD-ROM, you can replace its polite little "ding" with strains from Queen's "Bohemian Rhapsody." Or replace ICQ's "uh oh" instant message sound with a Homer Simpson "D'oh!"

Most sounds within an application are stored in the resource forks, making them easy to alter with ResEdit. Other sounds are in external files, which you can hack as long as the sounds are in a nonproprietary file format. We'll show you how to hack sounds for

both scenarios. Here's how to alter the sounds in Vortex Next Generation, a Breakout-style shareware game, or any other app that contains a SND (sound) resource. Feel free to apply these steps to other hackable games and apps.

HACK ANY APP WITH A SND RESOURCE

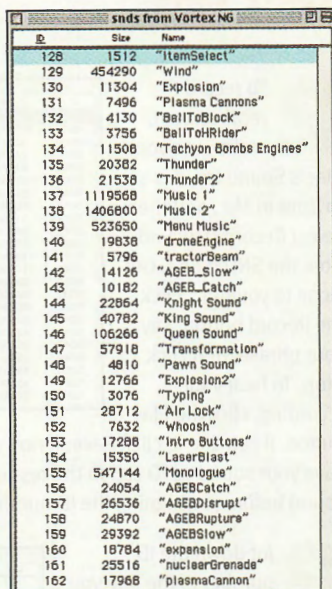
1 Before starting, make a copy of Vortex by clicking the app's icon once and pressing Command-D. (If you make a mistake in ResEdit, you can kill a program—always work on a copy.) Drag Vortex onto ResEdit to open it. ResEdit will display a list of resources that make up the game.



ResEdit displays a list of Vortex's resources, including the hackable SND (sound) resource.

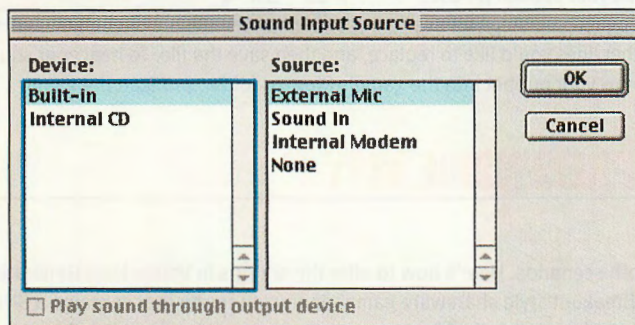
2 Double-click the SND icon to display a list of all sounds in the application. Listen to any sound by selecting it and pressing Command-T. Next, write down the ID numbers and names of all the sounds you want to change. Vortex's "Explosion" sounds OK, but we can do better.

Vortex features a laundry list of sounds—luckily the programmer was kind enough to name them for us.



ID	Size	Name
128	1512	"ItemSelect"
129	454290	"Wind"
130	11304	"Explosion"
131	7496	"Plasma Cannons"
132	4130	"BellToBlock"
133	3756	"BellToRider"
134	11508	"Tachyon Bombe Engines"
135	20382	"Thunder"
136	21538	"Thunder2"
137	1119568	"Music 1"
138	1406800	"Music 2"
139	523650	"Menu Music"
140	19838	"droneEngine"
141	5796	"tractorBeam"
142	14126	"AGEB_Slow"
143	10182	"AGEB_Catch"
144	22864	"Knight Sound"
145	40782	"King Sound"
146	105266	"Queen Sound"
147	57918	"Transformation"
148	4810	"Pawn Sound"
149	12766	"Explosion2"
150	3076	"Typing"
151	28712	"Air Lock"
152	7632	"Whoosh"
153	17288	"Intro Buttons"
154	15350	"LaserBlast"
155	547144	"Monologue"
156	24054	"AGEB_Catch"
157	26536	"AGEB_Disrupt"
158	24870	"AGEB_Rupture"
159	29392	"AGEB_Slow"
160	18784	"explosion"
161	25516	"nuclearGrenade"
162	17968	"plasmaCannon"

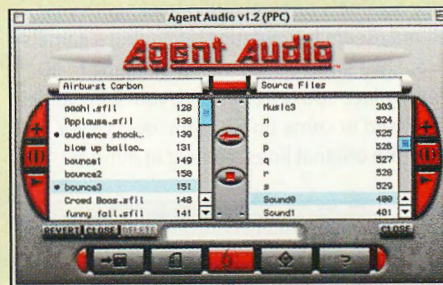
3 To record a new sound, launch Sound Studio and select New from the File menu. In the dialog box, choose 44.1kHz for Rate, 16 bits for Bits, and Mono for Channels—these settings are compatible with most games. Then click OK. Under the Audio menu, choose Sound Input Source. In the window, choose a source from which to record your new sound, such as your connected mic. Then click OK.



Tell Sound Studio where to grab sounds. Just don't use the modem as a sound source—it won't be pretty.

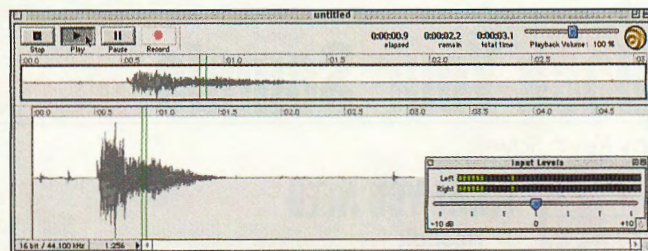
For Lazy Sound Hackers Only

If mucking about in ResEdit sounds like too much work, try Agent Audio Pro (\$29.95, www.clixsounds.com). This shareware app makes it easy to replace sounds in your programs. You can copy sounds from one program to another, but you can't record your own sounds from within the program. Warning: By using Agent Audio, you'll deprive yourself of the pleasant "dirty" feeling that comes from spelunking inside ResEdit.



Agent Audio lets you quickly copy sounds from one game to another—without futzing around in ResEdit.

4 To begin recording your sound, press the Record button in the main window and make some noise (we recorded ourselves making a loud explosive sound with our mouth). Keep an eye on the Input Levels as you're recording, making sure those pretty green lights don't turn red, which indicates clipping, or distortion. Press the Stop button when you're done. To hear your recording, press the Play button. If you want to rerecord your sound, select the entire waveform (Command-A), press Delete, and repeat this step.



In the world of sound recording, green is good and red is bad. Keep an eye on your Input Levels during recording.

Hack External Sound Files

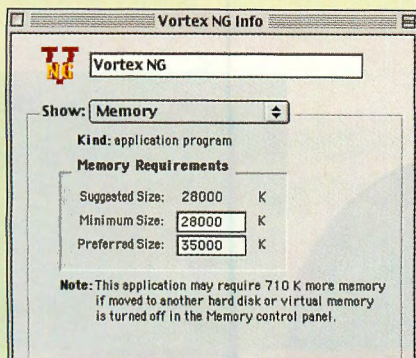
If ResEdit doesn't reveal a SND resource in a game, you'll have to dig elsewhere for sounds. Where? Everywhere—each program is different. Look for accessible (nonproprietary) sound files in your game's data folder—AIFF, WAV, MP3, or other audio formats. Game developers may have made these files invisible, so use ResEdit to sniff them out. Launch ResEdit and click Cancel in the dialog box that appears. Under the File menu, select Get File/Folder Info, and inspect all of the game's files and folders using the navigation window. ResEdit will reveal all invisible files. If you locate a hidden audio file, select it, click Get Info, uncheck the Invisible box, and save the file—it will appear as if by magic. If you've ever wanted to burn a CD of game soundtracks, this is one way to find those elusive audio files.

You can easily edit or rerecord any sound file with Sound Studio by following steps 3 through 6 of "Hack Your Sounds," p71. Just remember to always keep the file format the same when you replace external sounds—give your new sound exactly the same name and place it in the same location as the original.

For example, we replaced part of the background music in Strange Flavour's game AirBurst (\$5, www.strange flavour.com) by tossing out an original MP3 file (abmenutheme.mp3) and replacing it with an MP3 of Aretha Franklin's "Respect," which we renamed "abmenutheme.mp3" and placed in the same folder as the original. When we launched AirBurst, we grooved to Aretha while contemplating the game's main menu.

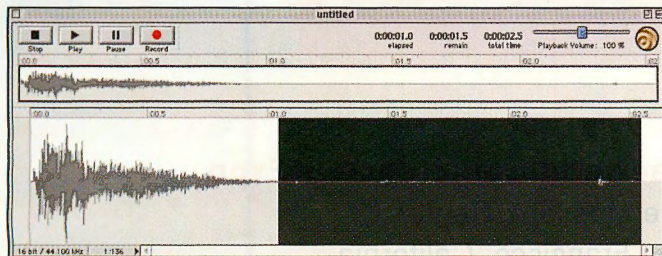
Crash and Burn

If your new sounds are a lot larger than the originals, your hacked application may run out of memory and crash. If you're having memory problems or running into long hangs with any hacked application, try allocating more memory to the program. Click the application's icon and choose Get Info from the File menu. Select Memory from the drop-down menu and increase Preferred Size by a few megabytes.



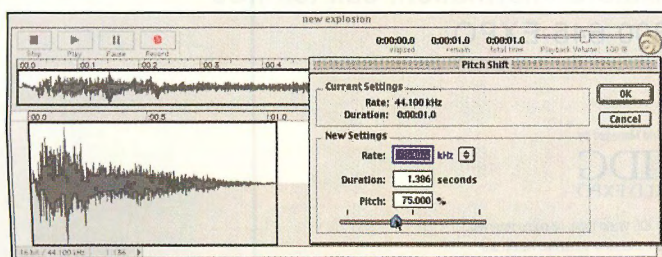
If your new sounds are larger than the original ones, increase the application's memory requirements to give it more elbow room.

5 Sound Studio features some good editing tools and filters to make your recording sound perfect. If you need to remove any extra noise at a sample's beginning, click and drag to select the noise from the start of the waveform to the beginning of the actual sound you want to keep. Then press Delete. Repeat with the noise at the end.



Get rid of the extra noise before and after your sound by drag-selecting the undesirable areas and deleting them.

6 To give our sound more boom, we lowered the pitch—select Pitch Shift from the Audio menu. Then lower the Pitch Percentage by about 25 percent in the dialog box, click OK, and press Play to hear the results. We also applied an echo effect to give our explosion some atmosphere. To add an echo, select Echo from the Filter menu. In the dialog box, you can experiment with the Echo Delay and Strength settings for your sound—we used a 35ms Echo Delay at a strength of 40 percent. When your sound is perfect, select it (Command-A) and then copy it (Command-C).



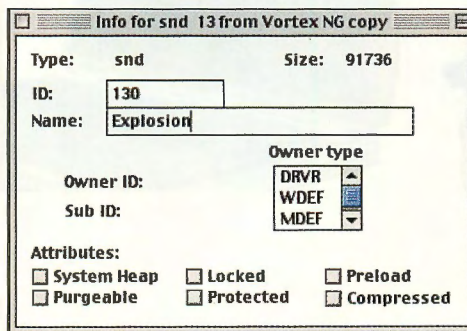
To make our explosion boomier, we lowered its pitch in the Pitch Shift window.

7 Go back to ResEdit, select the sound resource you want to replace (in our case, ID 130 "Explosion") and press Delete. Paste in your replacement sound (Command-V). ResEdit will add it to the bottom of the list as the next successive ID number.

159	29392	"AGEBSlow"
160	18784	"expansion"
161	25516	"nuclearGrenade"
162	17968	"plasmaCannon"
163	33608	"searchAndDestroy"
164	20858	"tachyonBomb"
165	23204	"tractorBeam"
166	14874	"hasAcquired"
167	33880	"isFinished"
168	39184	"newHRider"
169	11474	"playerOne"
170	10998	"playerTwo"
171	11610	"playerThree"
172	11780	"playerFour"
173	93188	"Portal Sound"
174	15708	

When we pasted in our new sound, it went to the bottom of the list, without a name and with the wrong ID number.

8 Give your new sound a name and the proper ID number by selecting it in the list and choosing Get Resource Info from the Resource menu. In the window, give the new sound the same ID number as the one you're replacing by typing that number in the ID field. Then give it the same name as the sound it's replacing and close the Info window. Save your changes and quit ResEdit. Now, launch the game, hold your breath, and listen for your new aural experience. Of course, you probably won't be satisfied with just one sound hack, so get yourself a caffeinated beverage and hack away at the rest of the sounds!



Give your new sound the same ID number and name as the one you're replacing.

Download Ready-Made Sounds

If you're shy about recording your own sounds, you can download ready-made sounds from the Net. Thousands of Web sites serve up zillions of sound files, making it easy to populate your games with animal noises, eerie Halloween effects, or sound bites from *The Simpsons* or *Star Wars*.

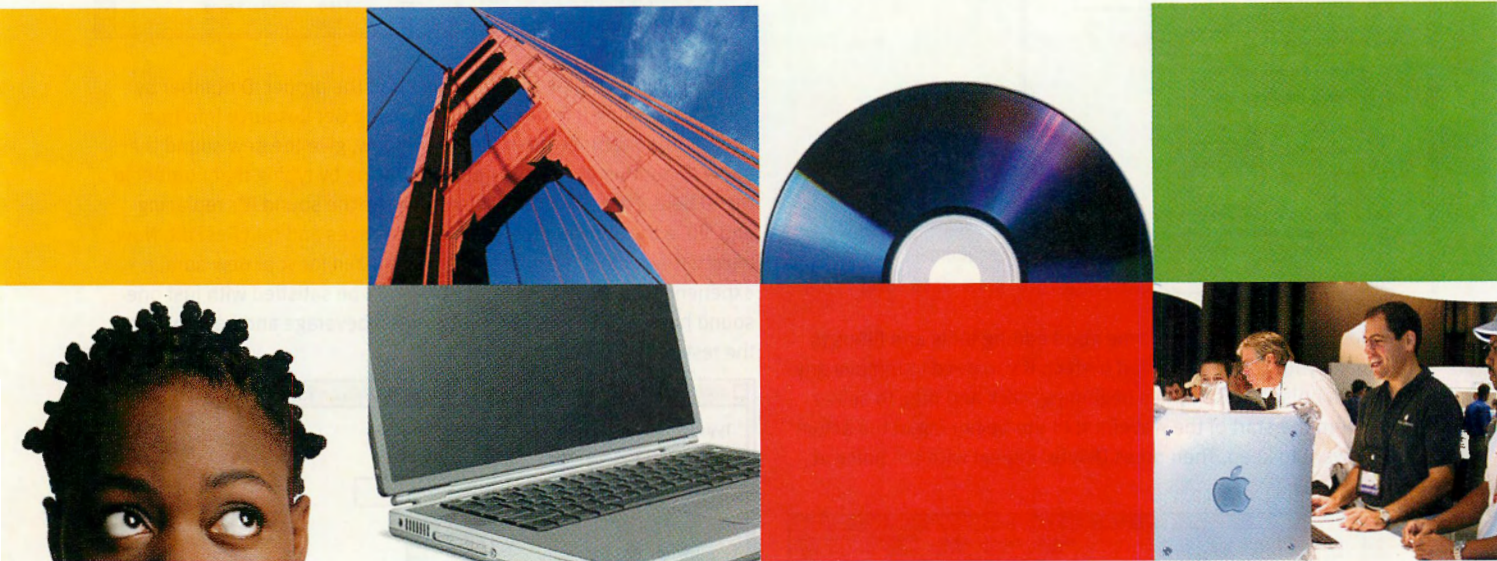
Don't limit your sound search to just Mac formats. Many of the best sound archives feature Windows-format WAV files. No problem. Just download them to your Mac and open the files with Sound Studio. Copy the sound to the clipboard and then paste it into a ResEdit SND resource—your Mac will convert the sound into the proper format.

For a massive list of Web sites where you can download sounds, see http://dmoz.org/Arts/Music/Sound_Files/Samples_and_Loops. Here are some good ones to start with:

www.bestwavs.com
www.geocities.com/TimesSquare/Cauldron/7706
www.catchawav.com
www.ibiblio.org/pub/multimedia/pc-sounds
www.wavhounds.com
www.wavsource.com

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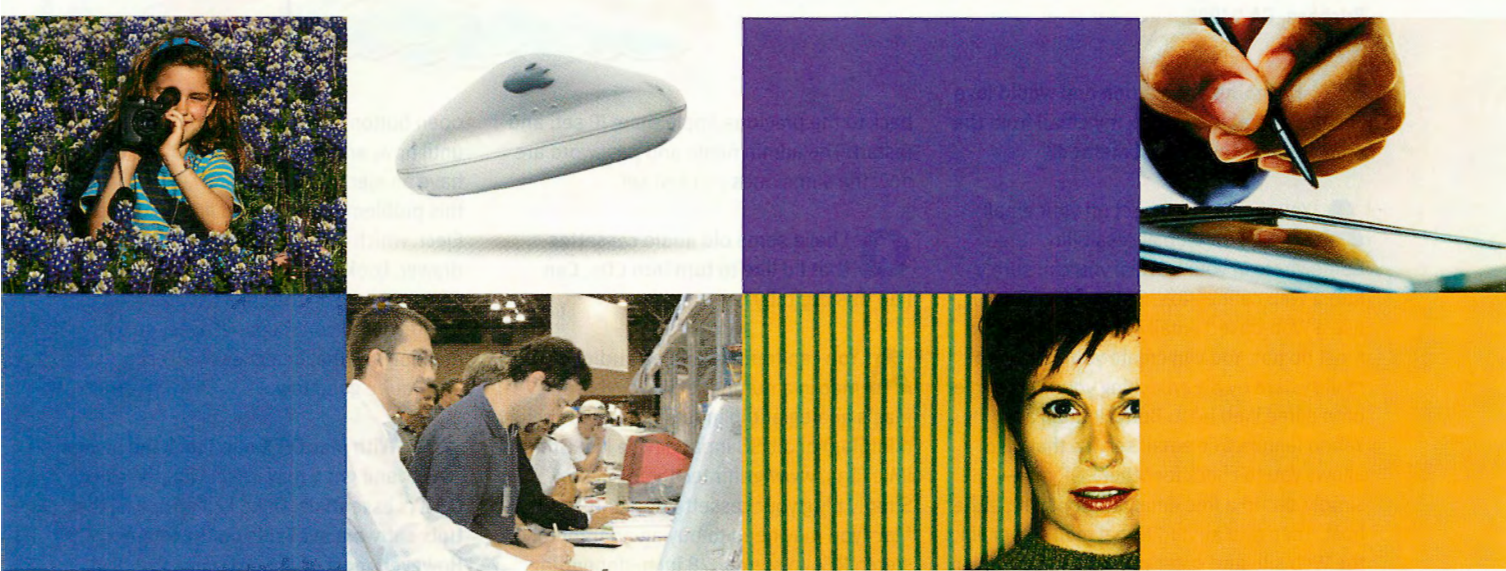
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Questions?

Submit technical questions or helpful tips directly via email (askus@macaddict.com) or c/o **MacAddict**, 150 North Hill Dr., Brisbane, CA 94005.

Q I'm going on vacation and would love to be able to check my email from the road. What is the easiest method?

A Your best bet is to set up your email account for Web accessibility. Somewhere in your travels, you can surely find a Web connection. Some ISPs, like AOL, use a Web-based email interface. However, most do not. You can create your own Web mail system by piggybacking your mail server onto a free Web host. Both Hotmail and Yahoo feature free email service that also allows you to check for other POP mail—simply set up a free email account with either host. Then add an additional mail server via the Web site and enter your ISP's POP server settings. You can then check your email using any Web browser around the world.

Q At my new job, I inherited the duty of maintaining an existing AppleShare IP server. The person I replaced didn't leave the administrator name and password. How can I recover this information?

A When you're using AppleShare, forgetting the admin password can be a real bummer. For the uninitiated, AppleShare is Apple's file-serving software for Mac OS 9 and earlier, and it can turn any Power Mac into a file, mail, or Web server in minutes. It's also incredibly easy to configure and use. Configuring, of course, is moot if you don't know the admin name and password.

You can change the name and password, but you need to have access to the Finder on the actual server. In the Extensions Manager, select Mac OS Base Only and restart. This disables all of the serving capabilities of the computer and turns it into a simple workstation. Once it reboots, open the File Sharing control panel (or Sharing Setup in older OSs) and change the Owner Name and Owner Password. Then open the Extensions Manager control panel, set the Extensions

The hills are alive with the sound of you've got mail!



ILLUSTRATION BY S. BRITT

back to the previous AppleShare IP set, and restart. The admin name and password are now the same ones you just set.

Q I have some old audio cassettes that I'd like to turn into CDs. Can I do this digitally?

A You can transfer analog audio to your Mac in a number of ways, via your Mac's analog audio input (stereo 1/8-inch miniplug) or a USB input device like Griffin's iMic (\$35, www.griffintechnology.com). Simply plug your cassette deck into your Mac (you may need to buy an adapter for stereo RCA to stereo 1/8 inch, depending on your deck's audio-out jacks), and launch any audio-capture application, like Ultra Recorder (\$20, <http://members.aol.com/EJC3>), to record the music to your hard drive.



Digitize your cassettes and vinyl by recording your Mac's sound input with Ultra Recorder.

Q I love my new G4, but I can't open the CD tray from my Macally keyboard, which I prefer over Apple's. How can I open the tray without having to hook up the Pro keyboard every time?

A Apple configured its Pro Keyboard to work in conjunction with a Mac, adding a CD-eject key and volume controls. The problem is that the new G4s lack the manual

open button present on all CD drive doors until now, and third-party keyboards don't have an eject key. Fortunately, Apple foresaw this problem and included an app called Eject, which you can use to open the CD drawer. Look for it on your installation CD in CD Extras—it's in the Eject Extras folder. Use the Keyboard control panel to set up a function key that launches the Eject program, and you're good to go.

Q With Mac OS X out, I took the plunge and got a new iMac. I figured since OS X is essentially Unix, I could use all the Unix software available on the Internet. However, most of the programs I've tried don't work—what's the story?

A Although Mac OS X can be considered a Unix system, all Unix systems are not created equally. Unix is not just one operating system; it is a collection of similar operating systems. Mac OS X is based on BSD (Berkeley Standard Distribution), just one of the many versions of Unix.

Developers generally write or compile each Unix app to a specific version of Unix. Although Mac OS X's version of Unix, Darwin, may resemble all the Unix versions out there in some ways, it differs notably in others. Therefore, developers must port, or rewrite, any Unix app to make it work under Mac OS X. Luckily, Unix versions tend to be similar enough so that porting applications from one version to another is a fairly simple process—one that many ambitious end users can accomplish on their own. For a quick fix, you can download a number of Mac OS X–ported Unix apps directly from the Internet—a visit to Softrak (<http://softrak.stepwise.com>), Mac OS X Apps (www.macosxapps.com), or Mac OS X Ports (<http://macosx.forked.net>) will lead you to a wealth of native OS X– and Unix-derived applications.

Q When I boot my Mac using the System CD that came with my computer, an extension loads with an icon that looks like an *N* in a circle. What is this?

A Think of it as Apple's digital version of NoDoz for the Mac. This little proprietary Apple extension, called *Insomnia*, makes sure your Mac doesn't go to sleep in the middle of a crucial installation. Some folks who use their Macs to run servers (which need to be on all the time) extract this extension from the system CD and install it on their Mac to prevent it from sleeping. However, a Mac that isn't acting as a dedicated server should be allowed to sleep, because this cuts down on power usage and saves electricity.



Insomnia Digital caffeine for your Mac.

Q We just installed a new laser printer in my office and it's configured with an IP address. How can I print to this Internet-enabled printer from my Mac using TCP/IP instead of AppleTalk?

A In a small office, AppleTalk is the easy solution for network printing. However, not all networks have AppleTalk-enabled routers and switches, which is one reason why printing via IP (Internet Protocol) may be a necessity. IP allows you to output to an Internet-enabled printer from anywhere in the world, as long as you have an Internet connection.

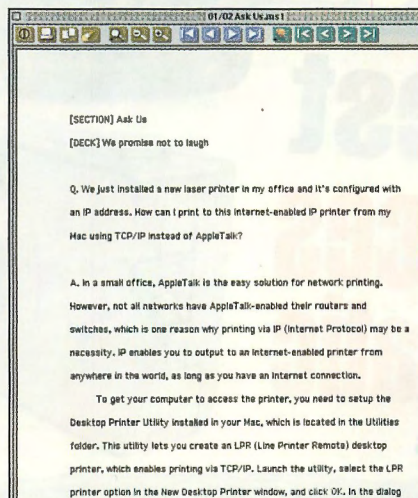
To get your computer to access the printer, you need to set up the Desktop Printer Utility, which is located in your Mac's Utilities folder (if not, use Sherlock to search for it). This utility lets you create an LPR (Line Printer Remote) desktop printer, which enables printing via TCP/IP. Launch the utility, select the Printer (LPR) option in the New Desktop Printer window, and click OK. In the dialog box that appears, click Change in the PostScript Printer Description (PPD) section and select the targeted printer from the Printer Descriptions list. Next, click Change in the LPR Printer Selection section and enter the IP address of the printer in the Internet Printer dialog box. Finally, click Create to generate your new desktop printer.

OS X users will find a similar utility app, called *Print Center* in the Utilities folder, that functions in the same manner. Simply launch *Print Center* and click *Add Printer* in the *Printer List* window. Then select *LPR Printers Using IP* from the drop-down menu, enter the IP address in the LPR Printer's Address field, click *Add*, and you're good to go.

Q I often get sent documents created in Microsoft Word. Unfortunately, I don't own a copy of Word. Can I open these documents without having to buy Word?

A If you're receiving Word documents often (as you say), you should bite the bullet and purchase Microsoft Office—it's a great productivity package that will justify its price in the long run. That said, you do have a few alternatives. If you're running Mac OS X, try Apple's built-in *TextEdit*—it does a decent job of displaying text from any Word DOC file, though embedded graphics will disappear and you may have to read through some extra gibberish at the beginning and end of the document.

Another option is to have your senders save their Word docs as RTF (Rich Text Format) documents before sending them to you. Many word-processing programs can open and save these files. Finally, if you can cough up a measly 20 bucks, try *icWord* (\$19.95, www.icword.com), a shareware app that lets you open and view Word documents—it even runs in Classic mode under OS X.



Microsoft phobic? Get icWord, and get the inside scoop on any Word document.

Q Mac OS X is great, but I miss having the ability to turn off the Empty Trash warning as I could in OS 9. Is there any way to do this?

A We were also disappointed with the warning's disappearance—luckily, it's back! Upgrade to Mac OS 10.1 and you'll find the long-lost disabler—though it executes a bit differently. To disable the Empty Trash warning, open the *Finder Preferences* from the *Finder* menu. In the dialog box, uncheck the "Show warning before emptying the Trash" check box, and you won't be pestered about your garbage habits anymore.

Q The Mac OS 10.1 update provided me with lots of new goodies, but I really need the Developer Tools that came with the full version of Mac OS X. Is Developer Tools available for 10.1?

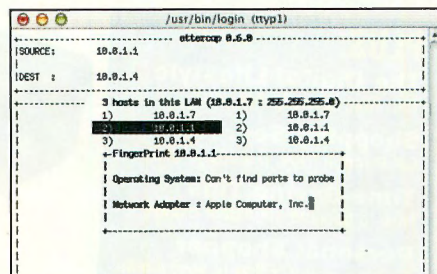
A The Mac OS X Developer Tools are really not necessary for the average user—even fairly advanced users will probably never have a need for them. But for ambitious developers, they do provide the tools necessary to start creating applications for Mac OS X. For nondevelopers, the biggest benefit of these tools is their ability to compile Unix applications for your system without too much trouble.

The full retail version of 10.1 includes the 10.1 Developer Tools—the free 10.1 update does not. If you have a fast Internet connection, though, you can download the Developer Tools from Apple's developer site—log on to <http://developer.apple.com> and click the *Join Now* link. Fill out the required information and choose the *Free ADC* Online program. It costs nothing and gives you access to some special developer software, including the 10.1 Developer Tools.

Q Now that I have a broadband Internet connection, I'm interested in checking out the traffic that passes over my network. What are my options for packet analysis in Mac OS X?

A Prior to OS X, the only real choice for packet sniffing and analysis on the Mac was *WildPackets' EtherPeek* (www.wildpackets.com). This amazing utility—with an amazingly hefty price of \$900—has unlimited features for collecting and analyzing network traffic.

As for Mac OS X, our favorite is a freeware app called *EtherCap* (<http://ethercap.sourceforge.net>). This command-line utility may not be as pretty as *EtherPeek*, but it's equally capable. Download the Mac OS X package installer from <http://macosx.forked.net> and analyze away. The learning curve is tough, but well worth the time.



It ain't pretty, but Ethercap is super at sniffing out Internet invaders.

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D-510



- *LCD Monitor
- *3X Optical Zoom
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- *2.11 Mega Pixels
- *1600X1200 Resolutions
- *Easy To Use

E-100RS



- *1368x1024 Pixels
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- *32Mb Smart Media Card *High speed frame rate

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Nikon



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- *2560 x 1970 Pixel images
- *3x Zoom-Nikkor lens w/ wide angle 28-85mm *256-Segment Matrix Metering, *TTL White Balance, *1.8"LCD swivel monitor *1/4000 sec. & 3-frames-per sec. *32MB Compact Flash(TM) Card.

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- *D1X: 3008 x 1960
- *5.89 Million effective pixels *5.33 Megapixel
- *Continuous/ burst 3fps up to 9 images

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- *D1H: *2000 x 1512
- *2.62 Million effective pixels
- *2.7 Megapixel
- *Continuous/burst 5fps up to 40 images

Coolpix 995



- *3.34 Million Pixel
- *38 MM-152MM
- *4X) Zoom Lens

Coolpix 885



- *2048x1536 pixels
- *3.14 Megapixel
- *3X Optical Zoom
- *4x Digital zoom
- *16Mb Compact flash

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- *Exclusive Super CCD Technology
- *5 Exposure modes
- *Histogram display
- *2" LCD Color screen

PENTAX

OPTIO 430



- *3.76 Million effective pixels
- *4.13 Million pixel sensor
- *37 mm - 111 mm (3x) Zoom lens

New

SONY



Cybershot F707

- **4.92 Megapixels
- *5.24 Megapixel sensor
- *38 mm - 190 mm
- *5x Digital zoom lens

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DSC-S85



- *2272 x 1704
- *4.1 Megapixel
- *34mm-102mm (3x Optical Zoom)
- *2x Digital Zoom
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MVC-CD300



- *2048x1536 Resolution
- *2.5" TFT LCD
- *3X Optical Zoom Lens
- *2X Digital Zoom
- *Voice Mode

DSC-S75



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- *Spot Metering
- *Variable ISO

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- *2.76 Megapixel
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- *36 MM fixed lens
- *Continuous/Burst
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- *2048 x 1536 Resolution
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- *3x Optical Zoom
- *6X Digital Zoom
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- *8MB memory stick media

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- *10X Optical Zoom Lens
- *2.1 Megapixel Resolution
- *39-390MM Zoom
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- *1.3 Megapixel CCD
- *3X Digital zoom
- *2X Optical zoom
- *8 Mb internal memory

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- *38mm
- *3X Digital zoom
- *8Mb Internal Memory
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- *2.2 Megapixel
- *8MB Internal Memory
- *Optical Viewfinder
- *2X Zoom
- *Fixed Focusing
- *Auto Exposure

Canon



Powershot G2

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- *4.1 Megapixel
- *34 mm - 102 mm
- *3x Zoom lens
- *Built-in flash
- *Built-in high speed USB interface

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- *37 MM-370MM
- *10X Zoom Lens

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- *3.34 million pixel sensor
- *35 mm - 105 mm (3x) zoom lens

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*Laserlink Wireless Connection
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*1360x1020 Digital Still Images,
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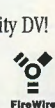


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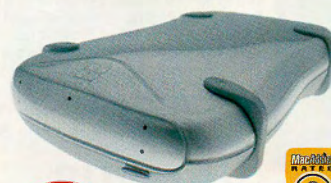


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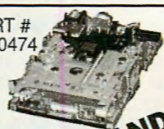
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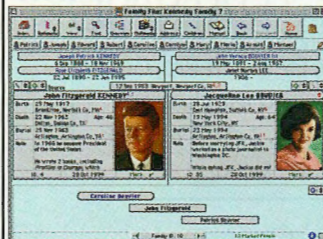
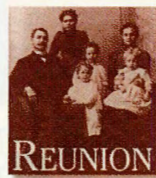
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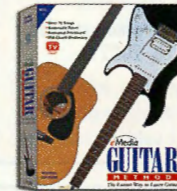
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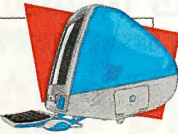
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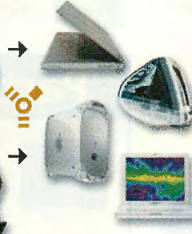
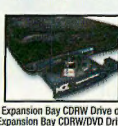
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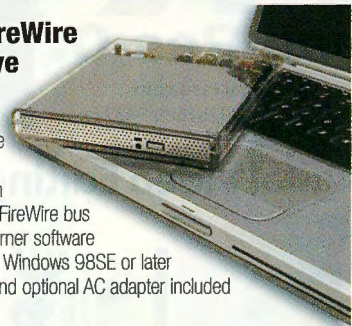
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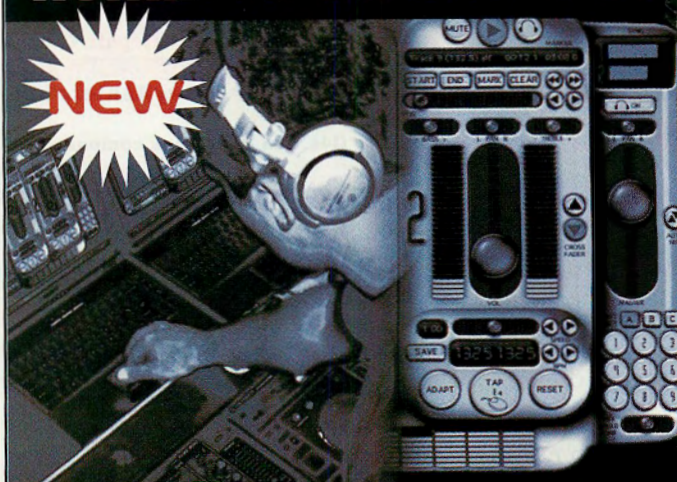
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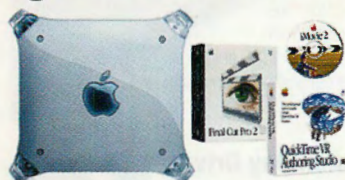


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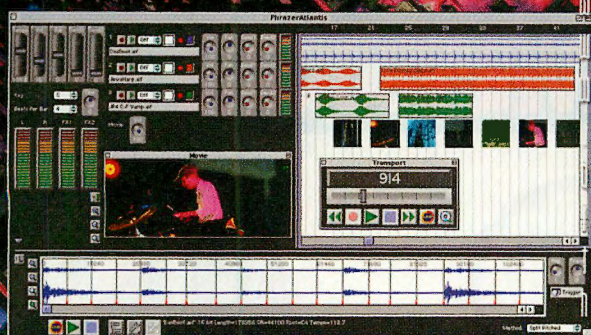
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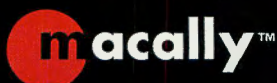
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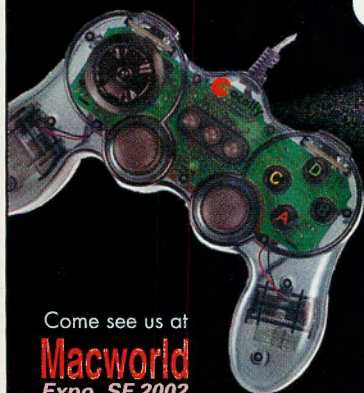




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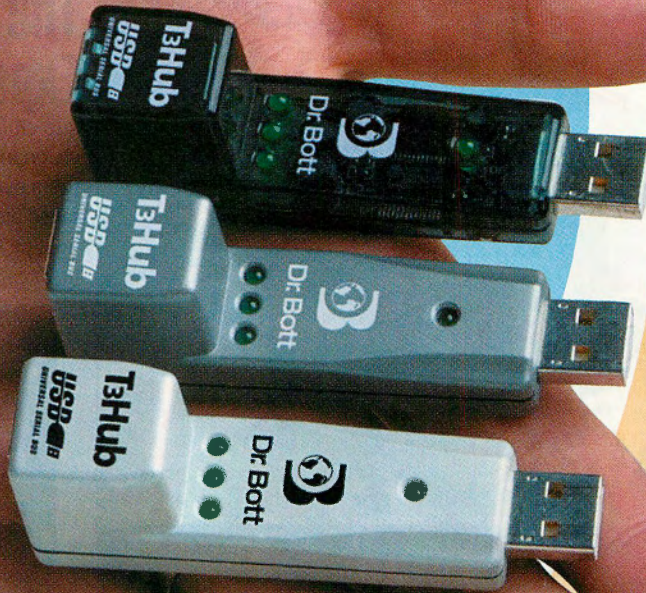
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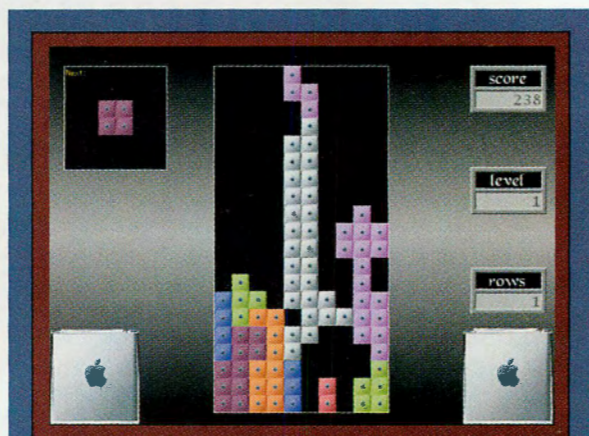
Don't let the back cover hit you on the way out.

Games That Didn't Make Our List



The Simms: Apple Party Expansion Pack

Rub elbows with Apple bigwigs and party on with various Apple visionaries and future adversaries, all in the hopes of winning them over so you can land a job at Apple. Unfortunately, the game takes place in the era of former Apple CEO John Sculley, who's hosting the bash at his party pad, and we're forced to watch the masses gather and vote Steve Jobs out of the house.

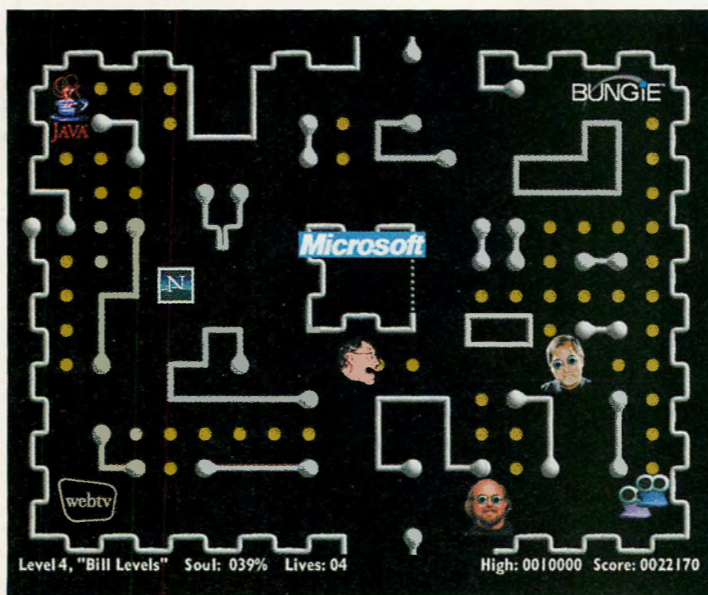


Cuberis Max

A game of utmost strategy, the goal of Cuberis Max is to keep the incoming G4 Cube inventory (which falls from the sky) from piling up to the ceiling by strategically manipulating the falling machines so they lie in neat, solid rows—arrange a solid row and those Cubes will vanish from the store shelf. However, because Cubes tend to stockpile faster than they vanish, we found it impossible to win.

Bill Man

Guide the greedy gobbling head of Bill Gates as he swallows up dot-com dots, innovative companies, competing technologies, company heads (à la Apple CEO Steve Jobs and Sun VP James Gosling), and anything else that gets in his way. While we're sure PC punks get their jollies playing this one, we feel nauseated every time Gates swallows Bungie. Plus, those darn dots give us bad Blue Dalmatian iMac flashbacks—ack!



The Joy of Tech

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TechTool Pro 3 is the super utility for your Macintosh. Besides repairing and recovering data, TechTool Pro can help you circumvent problems in the first place. Our new virus detect and repair feature, as well as our software conflict check feature, lets you keep your computer in tip-top shape. When booted from the included emergency CD, you can even check, repair and optimize your OS X computer.

Every day, more and more Macintosh professionals are choosing TechTool over other system utilities. In fact, even Apple Computer includes TechTool Deluxe with every copy of their AppleCare™ Protection Plan. Simply put, TechTool Pro 3 is the most complete and powerful troubleshooting utility available for your computer. Why would you settle for anything less?

In with the newer...



For Apple's next-generation operating system, you'll need a next-generation disk utility. That's why Micromat has introduced Drive 10, the first and final disk utility for Mac OS X. Problems with your drive? Drive 10 can repair almost any drive problem with one simple click of your mouse. All within OS X's native environment.

While Drive 10 is a new product, it is derived from TechTool Pro, Micromat's world-class diagnostic and repair utility. Using TechTool's time-tested routines as well as some new routines developed exclusively for OS X, Drive 10 offers many tools for checking and repairing any drive on your system. Don't entrust your OS X drive to ancient utilities. Protect your data and drive safely with Drive 10.



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3) Adjust the scale of your new layer to your liking, and place it. 4) With the blur tool, blur the edges of the fish for realism.

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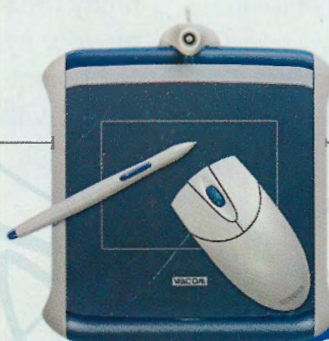
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